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ABSTRACT

Continuous vocational training (CVT) in the road freight and passenger transport sectors in the member states of the European Community (EC) was examined to identify exemplary and significant practices across the EC and determine the extent of the transferability of the identified exemplary training between and among the member states. In all, case studies of CVT at 50 firms in 11 countries were conducted. Special attention was paid to the following: the nature of the road freight and passenger transport sectors in the EC (structure of the sectors, forces of change, emerging business strategies, factors influencing each sectors' development); the employment environments of both sectors (legislation, employment trends, recruitment practices and entrants' education level, productivity, demographics, working conditions, and role of the social partners); and CVT in both sectors across the EC (initial training, developments in CVT, bottlenecks in the CVT system, training budgets and costs, and future training requirements). Specific recommendations for improving CVT in small and large companies were presented. (Contains 63 tables/figures. Appended are a framework for analysis of the economic return of company training in road transport and 45 references.) (MN)

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CONTINUOUS VOCATIONAL TRAINING IN THE ROAD FREIGHT AND PASSENGER TRANSPORT SECTORS

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This survey on continuing vocational training in the European Road Transport Sector was carried out within the framework of the EC FORCE Programme. George Kintzelé and Judith Grieve were responsible for overseeing the completion of the report and their direction, assistance and many suggestions were greatly appreciated.

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The survey was carried out by a Central Team of Consultants from Deloitte & Touche (Ireland and Portugal) and the Netherlands Economic Institute and a national rapporteur from each country as shown overleaf. The co-operation of all has been an essential part in producing this report.

Finally, we would also like to thank Mr Georg Spöttl who gave us the benefit of his experience from previous European sectoral reports.

This survey was carried out by a central team of consultants and by national rapporteurs from each Member State.

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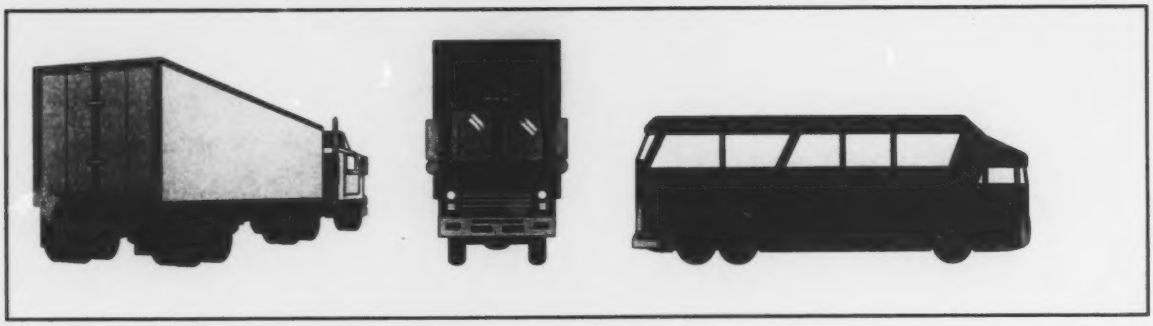

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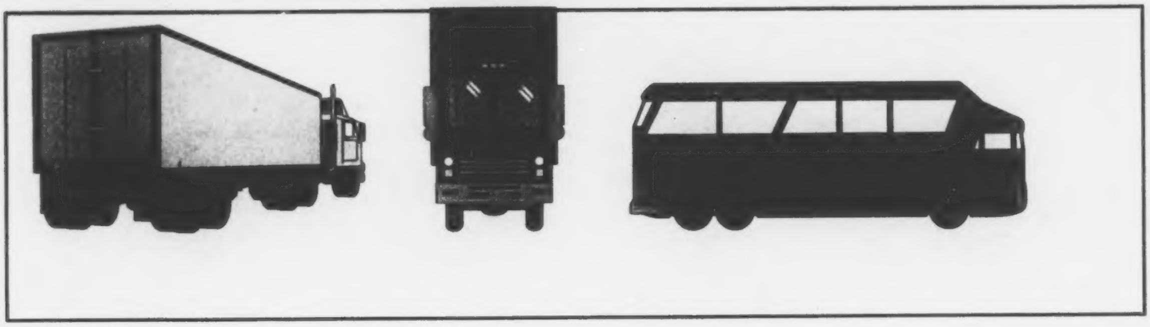

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EXECUTIVE SUMMARY

OBJECTIVES OF THE REPORT

The main purpose of this report is to identify exemplary and significant practices across the twelve member states in the field of continuous vocational training in the Road Freight Transport Sector. It also seeks to discuss the transferability of such exemplary training from one country to a range of others or to the whole European Union.

This Synthesis Report represents a summary of all of the findings in the national report. Each national report discusses the road freight transport sector in the relevant country and also presents interesting case studies of road transport companies. In all forty four case studies were presented. The Synthesis report contains a discrete section of recommendations on methods to upgrade and harmonise continuous vocational training across Europe.

NATURE OF THE ROAD TRANSPORT SECTOR IN THE EC

The role of transport in the economy is becoming more and more important. When compared to alternative transport modes, road transport scores highly on availability, flexibility, frequency and speed.

Road transport nearly doubled in the period 1981-1992 for the Netherlands and Belgium. For most other countries, the sector grew by 40%-50%. Ireland, Greece and Portugal all have lower levels of road transport activity because of the peripheral nature of their locations and the small land mass. For the future, the growth of road transport is expected to continue - quantitative prognoses for the Netherlands and Germany point to an expected doubling of production until 2010/2015.

The most important part of road transport is still national, with just under 21% of all EU tonkilometres accounted for by international transport. Measured in tons, this proportion is even smaller.

However, the proportion of road transport which occurs on an international basis is increasing. This reflects the increasing internationalisation and growing integration of EU economies - as well as the growth in road versus other transport modes.

Across all member European Member States road transport on a hire and reward basis carries more than half of tonkilometres. In nearly all countries, the proportion of hire and reward (as opposed to own account transport) is increasing. Manufacturing companies are increasingly out-sourcing the distribution function and are sub-contracting to logistics companies who provide "Value Added" distribution services.

FORCES OF CHANGE

The forces of change that are currently influencing the development of road transport are summarised in Figure 1 below.

Figure 1

Forces of Change in the Road Transport Sector

Safety Issues	- driving time, speed and distance
	- vehicle construction and testing
	- regulations for drivers and road standards
Technology Developments	- admin & operations, IT & EDI
	- vehicle technology
	- road infrastructure
Quality Issues	- ISO Certification
	- customer demands and customer care
	- impact of new technologies
Legal Requirements and Changes	
Flexibility and Customer Demands	
Green Issues	- transit traffic
	- pollution
	- fuel efficiency
	- alternative transport modes

EMERGING BUSINESS STRATEGIES

Road transport companies are adopting strategies which are geared to deal with the forces which are driving change in their industry.

Analysis of the national sectoral reports and case studies makes it possible to summarise the general business strategies which prevail in the road freight transport sector as follows:-

Figure 2

Generic Business Strategies in Road Freight Transport	
Low-Cost	Specialisation
High Quality	Integrated Logistics

Low Cost

Low Cost road transport operations tend to be small, distribute around a small area and have unsophisticated delivery systems which low technology vehicles and basic office technology.

It is likely that, as the sector becomes more developed, low-cost strategies will be followed more and more by medium and large size companies who already provide everything the customer wants in terms of quality, safety, technology, logistics, etc. At the moment, these companies are investing time and significant sums of money installing the necessary hardware and software and customers are willing to pay for it.

Specialisation

Some companies are differentiating themselves and are operating in distinct niche markets where the customers have special needs. Companies specialise by product segment or geographical area.

Typical product specialisations include transport of refrigerated goods, dangerous goods or high value items. These companies usually invest in high-tech equipment and skilled personnel - with obvious implications for CVT.

Quality

Many companies follow a strategy on the basis of service quality. They do not wish to invest in specialisation and yet neither do they want to compete in the high risk, low margin arena of the low-cost strategy.

These companies tend to actively promote their high service standards and certification achievements.

Integrated Logistics and Transport

This strategy is adopted by large road transport operators who are serving multinational customers. The strategy requires investment in customer relations, EDI, warehousing, capacity vehicles and various vehicle types. A high level of skills is required.

FACTORS INFLUENCING THE DEVELOPMENT OF THE SECTOR

The Single European Market has been developing a common transport policy for many years now. More recently, common transport infrastructures have been designed (including the Trans European Road Network or TERN) and associated legislation and deregulation of the transport market has taken place. These changes have resulted in growth in transport and also in increased competitive pressure. The pressure in turn is leading to improvements in the quality of service and a general requirement for the upgrading of skills in the sector.

The changing size of road transport companies also affects competition. While the majority of companies are small the few large operators have the majority share of the market.

EMPLOYMENT ENVIRONMENT

Nearly 2% of total employment is in professional road transport (passengers and goods). This corresponds with a total employment of 2.5 million in 1993. Since 1990 there has been a slow down in employment growth - corresponding with a general economic downturn and an overall increase in productivity.

The greatest single employment category in road transport is that of the driver. However, borderlines between occupations are often vague.

It appears that the educational background of employees in road transport is limited. This is particularly so for drivers, while higher management executives are often required to have specialised education in IT or logistics. Specialised transport education courses are therefore becoming more common for this latter group. The limited educational background of the majority of the workforce, however underlines the need for CVT in developing companies.

In general, productivity levels in all countries are increasing and the majority of the workforce is male. Some countries have developed special training courses for women.

TRAINING IN ROAD TRANSPORT

In 1989, EU Directives concerning access to the profession of road transport of goods and passengers in the national and international domain were modified. This brought profound changes to the system of initial vocational training for road transport.

Some countries now have developed technical schools which form part of secondary education. Others have apprenticeship systems and many have special transport courses at third level education.

There are some countries with a greater tradition for initial training (e.g. France and the Netherlands). In these countries changes have been made to improve and diversify the range of subjects in order to satisfy the new needs of the sector. Those countries with less of a tradition for vocational training in road transport (e.g. Portugal) are making greater efforts now. In the last few years they have realised that initial training is a prerequisite for survival in the European Market.

There are various different types of training providers but it is possible to group them into these areas:-

Figure 3

Main Types of CVT Providers across Europe

(i) Social Organisations

Employers associations, Trade unions, Unemployment Services. Training of trainers and various courses run on an external/internal basis.

(ii) Commercial Training Services

Training of trainers, various courses run on an external/internal basis for road haulage companies

(iii) Road Haulage Companies

Trained trainers design and implement customised training courses.

Certain characteristics particular to road transport work against the effectiveness and development of CVT in that sector.

- Many small companies cannot spare the staff or time to develop courses or to attend them. This is significant as a high proportion of companies are relatively small.
- The unconventional working hours of drivers makes it difficult to provide training courses during normal working hours to groups of students.
- Companies can be reluctant to train employees for fear of them being poached afterwards by other companies.
- There is still a relatively low appreciation for the benefits of training and management are only beginning to become more aware of the training requirements of their employees.

TRAINING REQUIREMENTS

There is a remarkable overlap of the training requirements across countries. A summary of these requirements is presented in Figure 4.

Figure 4

The Main Areas Where Training Requirements Exist
Technology Development
Technology Management
Environmental Controls
Safety Procedures
Customer Service
Role of the Driver
Legislation & Harmonisation
Logistics Management
Telecommunications

VAILABLE

EXEMPLARY CVT CASE STUDIES

Many of the exemplar case studies identified in this survey displayed common characteristics which can be summarised as followed:-

Figure 5

Characteristics of Innovative & Successful CVT in Companies

- ⇒ *Assessment of training needs*
- ⇒ *CVT based on corporate objectives*
- ⇒ *Innovative methods of delivering training*
- ⇒ *Highly developed CVT delivery*
- ⇒ *Close links with training bodies, industry groups & equipment manufacturers*
- ⇒ *Co-Operation between smaller companies*
- ⇒ *Highly focused CVT; identified target groups*
- ⇒ *CVT customised to suit transport/product type*
- ⇒ *Initial and continuous training linked together*
- ⇒ *Commitment to service quality included in training*

CONCLUSIONS & RECOMMENDATIONS

The findings of this survey of CVT in the road transport sector can be grouped together in terms of their relevance for: small and large road transport companies, transport customers and training bodies, social partners.

Small Companies are encouraged to copy the methods used by the larger companies. They should also keep in close communication with industry groups, training bodies, manufacturers and large customers. Small companies should share the cost of expensive materials with other small companies and should encourage training organisations to purchase the latest equipment. In addition, the use of long distance learning material could help these companies to train their employees at a lower financial and time cost.

Larger Companies tend to have well developed training with dedicated training personnel. These companies are encouraged to keep separate financial records for training and to evaluate the effectiveness of their CVT programmes.

Customers are directly affected by the level of CVT in road transport companies. They have the power to influence the level of training and should consequently work closely with the transport supplier to ensure quality standards.

Training Bodies and Social Partners also clearly influence CVT development. By working with road transport companies they share ideas and costs and provide training expertise. In some countries the training bodies utilise levies which are collected from the transport companies. Levies have the advantage in that they reduce the incentive to poach employees from other companies.

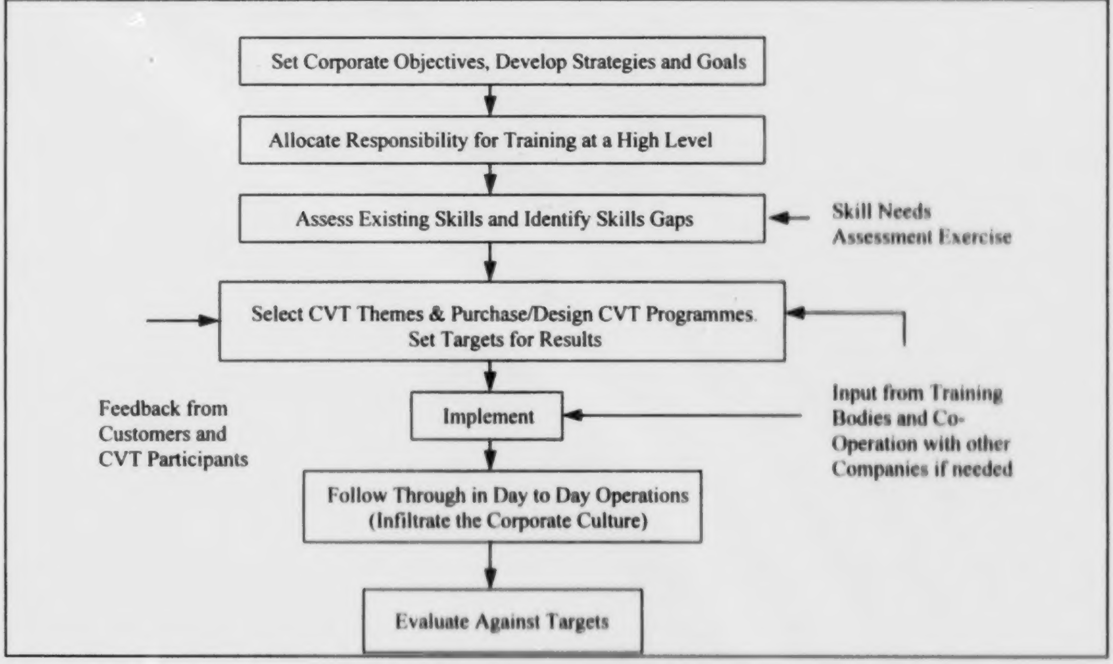
RECOMMENDATIONS

Drawing from our review of the national report in this survey and from our analysis of the European Road Transport Sector, we have developed a set of recommendations. These apply to any company wishing to set up or develop their own CVT programmes so that their business can be more effective and profitable.

The flowchart in figure 6 below summarises the recommendations in this report.

Figure 6

A Framework for Developing CVT


Set Corporate Objectives, Develop Strategies and Goals
Allocate Responsibility for Training at a High Level
Assess Existing Skills and Identify Skills Gaps
Skill Needs Assessment Exercise
Select CVT Themes & Purchase/Design CVT Programmes. Set Targets for Results
Feedback from Customers and CVT Participants
Implement
Input from Training Bodies and Co-Operation with other Companies if needed
Follow Through in Day to Day Operations (Infiltrate the Corporate Culture)
Evaluate Against Targets

1 - STUDY OBJECTIVES AND METHODOLOGY

This report has been produced under the umbrella of the FORCE programme which, since January 1995 has been combined with COMETT, EUROTECNET and PETRA to form the LEONARDO da Vinci programme for transnational training activities in the European Community.

1.1 OBJECTIVES

The main purpose of this report is to identify exemplary and significant practices across the twelve member states in the field of continuous vocational training in the Road Freight Transport Sector. It also seeks to discuss the transferability of such exemplary training from one country to a range of others or to the whole of the European Union.

It was hoped that one of the side effects of this study would be that the surveys behind it would contribute to the promotion of co-operation between companies with different levels of access, investment and provision in terms of continuing training (a principal objective of the FORCE programme). At the same time, it was hoped that these surveys would contribute to the European dialogue on achievements and training requirements in the road freight sector. This Synthesis report therefore contains a discrete section of recommendations on methods to upgrade and harmonise continuous vocational training across Europe.

It was expected that an analysis could be undertaken of the key forces of change in the road transport sector across the European member states and that it would be possible to identify the various ways in which countries have reacted to these changes. It was also planned to identify ways in which the case study companies reacted to these changes and how they utilised continuous training to handle new opportunities and threats and to meet new market demands.

It was hoped that a range of questions could be answered by the case studies, the sectoral reports and from the participation in the project of employers, workers and social partners. The questions included the following:

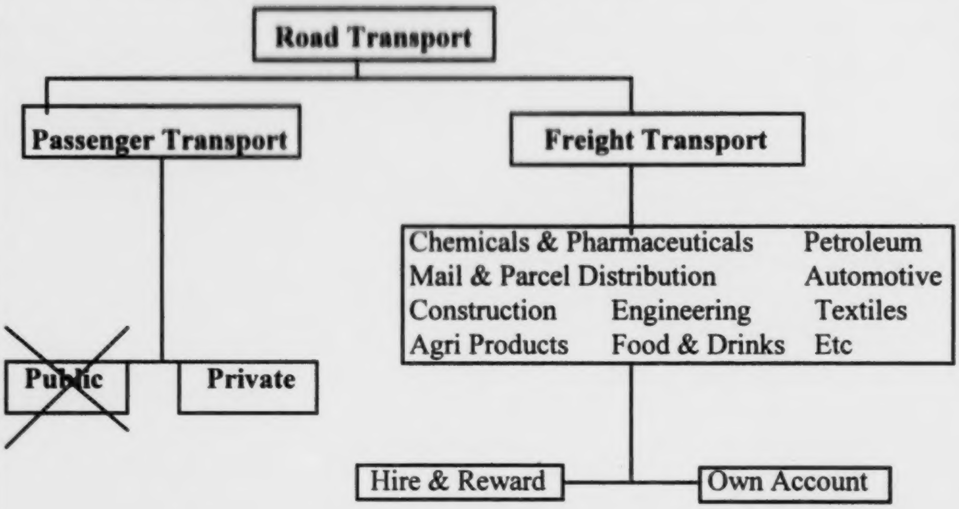
- What CVT programmes have been developed by road transport firms and how are they developed?
- How are training needs assessed and are all sections of the workforce targeted for CVT?
- To what extent do *both* the worker and the company benefit from the CVT?

- What is the cost of CVT and do companies try to measure the benefits of the investment?

1.2 DEFINITION OF THE ROAD TRANSPORT SECTOR

To ensure that the national surveys and statistical data covered the same areas, the Road transport Sector was defined, for the purposes of this study, as follows:

CVT IN THE ROAD TRANSPORT SECTOR


Road Transport
Passenger Transport
Freight Transport
Chemicals & Pharmaceuticals
Petroleum
Mail & Parcel Distribution
Automotive
Construction
Engineering
Textiles
Agri Products
Food & Drinks
Etc
Public
Private
Hire & Reward
Own Account

A separate supporting report has been produced on CVT in the Private Passenger Transport sub-sector and is included as an appendix to this report as both sectors have much in common. The transport of freight is the core business or companies who are classified as Hire & Reward. These companies carry products for companies in a range of sectors. In an Own Account company transport is a support service to the core business. These companies do not outsource their transport needs but fulfil them in-house

1.3 DEFINITION OF CONTINUOUS TRAINING

Continuing Vocational Training is defined by the Commission as follows:

"...all vocational training activities involving an enterprises employees with the exception of initial training of apprentices or trainees with a special training contract. To qualify as continuing vocational training, the training must be planned in advance and fully or partially financed by the enterprise.

Continuing vocational training (CVT) covers the following training activities:

- *CVT provided through externally and internally arranged courses:*

- *external courses designed and managed by organisations not part of the enterprise;*

- *internal courses designed and managed by the enterprise itself*

- *CVT in the work situation:*

- *employees who have undertaken any planned periods of training, coaching, instruction or practical experience, using the usual work tools, either at the immediate work place or in the work situation.*

- *Other types of CVT:*

- *Instruction at conferences, workshops, lectures and seminars, where the primary purpose is training;*

- *planned learning through job rotation, exchanges, secondments and quality circles;*

- *self learning through open and distance learning, video/audio tapes, correspondence courses, computer-based methods or use of Learning Resource Centres."*

These definitions were used as a basis for the survey and were consulted when any clarification of CVT was required during company interviews.

During the course of this study it became clear to the rapporteurs and Central Team members that CVT, as defined above, could not really be clearly separated from initial training or from unplanned training. Initial training has a direct link to the requirements for CVT. In addition, companies appeared to be aware that employees were receiving valuable training "in the work situation" although many of them had not actually planned this training in that it had no definite timeframe and no formal structure. Accordingly, there is a separate section in this report on initial training and reference is also made at relevant stages to the role of CVT in the work situation (sometimes referred to as on-the-job training).

1.4 METHODOLOGY

The methodology essentially incorporated a study of the road freight transport sector in each country, together with a selected number of case studies which are likely to provide examples of innovative and successful training practices.

Four separate methodological memoranda were written and provided to the rapporteurs for the purposes of this study:

Methodological Memorandum I: Methodology for the Sectoral Surveys on a Continuing Vocational Training Plan

Methodological Memorandum II: Case Study Pre-Selection

Methodological Memorandum III: Guide for the Presentation of the Road Transport Sectoral Analysis

Methodological Memorandum IV: Guide to Carrying Out Case Studies

These methodologies were defined by the central team after meetings with representative social partners and sector experts.

As the case study and sectoral reports were being written, it became clear that it was not always possible to ascertain the information as outlined by the relevant memorandum. However, each rapporteur attempted as far as possible to stick to the format required.

On occasion, the information was not available for reasons of confidentiality or simply because the company had not recorded the information. In situations like this the rapporteur attempted to present the general picture. In particular, the data for the completion of the matrices as per Methodological Memorandum IV tended not to be available to any great detail. As a result, the rapporteurs incorporated the available data within the body of the text rather than present an incomplete matrix.

One area in which information was particularly scarce was that of cost analysis. Many companies could provide information on the cost of external course fees but not on the travel and accommodation expenses, on the wages which still had to be paid to course participants during the course, or on the cost of internally held courses. Increasingly, companies are paying more attention to the benefits of training as compared to the investment required. This has underlined the need for studies such as this one which can highlight the potential outcome of training investments.

On a European level, data could was not always available for each country and as a result some data charts - particularly in Section 3 - use a smaller range of countries to represent the European Union. However, using a combination of statistics, European reports that have already been compiled and the information that came from the national reports, it has been possible to present a fairly comprehensive picture of CVT across Europe.

1.5 SELECTION OF CASE STUDIES

Overall, a target sample set of fifty case studies was agreed. Eventually fifty seven case studies were selected, including the private passenger transport cases. It was envisaged that these case studies would provide a mainly qualitative assessment of the most exemplary and significant practices found in continuing training in companies or by third parties on a company's behalf.

A pre-selection questionnaire was completed by ten potential participant companies and a summary sheet was also completed by each rapporteur for each company. This provided a screening process to ensure that the company was aware of the process of continuous training and that it could provide an suitable case study. The latter point was important as the sample set had to represent a diversity of trade sectors and company sizes. The pre-selection questionnaire also enabled rapporteurs to ascertain whether the companies would be willing to contribute to the study.

The two priority criteria for the case studies were the transferability and exemplary nature of the CVT. These were supplemented with three other criteria: the innovative character of the project, the type of company and type of training.

The fifty case studies were selected with these criteria in mind and with reference to the advice of the social partners represented on the monitoring committee. The case studies finally selected can be classified as shown in the matrix overleaf.

FORCE ROAD TRANSPORT SURVEY - FINAL CASE LIST

Country	Company	Fleet Size	Category of Transport	Type of Firm	Product	CVT
Belgium	Corneel Geerts Transport	75	A	A	D	A,E,D
	Transports Baonville	6	A	A	D	B,F
	Vanneste	20	A	A	D	A,C,D
	Transports SADAR	60	C	C	H	E,C
Denmark	Roland Munch	100	A	A	D	B,D,F
	Adams Transport	66	A	A	F	A,D
France	SAEM T2C	66	C	C	H	A,C
	GT Location	852	A	A	F	B,C
	TFE	1600	A	A	A	E,A
	Comap	7	A	A	B	A,B,C
	Setrap	30	C	C	H	B,C,F
	Brinks	800	A	A	I	A,B,F
	STBC		A	A	D	C
Germany	Trans-O-Flex	348[1]	A	A	B/D	A,B,C
	Edgar Graß	26	A	A	E	B,F
	Kühne & Nagel	0	A	A	D	D,C,B
	Wendschlag & Pohl	6	A	A	B	A,B,C,D
	Assoc Bad Wurten	0	C	C	H	A,B,C
	DHL	450	B	A	G	A,B
Greece	Eschilos	47	A	A	B	B,F
	3E	50	A	B	A	C,A
	KTEL	79	C	C	H	G
	Workshop	small	A	A	D	G
Ireland	Bell Lines	200	A	A	A/B	A,F,C
	Blueflite	11	A	A	D	A,C
	Irish Express Cargo	90	A	A	D	A,C,E,F
	Freightshift	small	A	A	D	G
Italy	Sinteco	70	A	A	D	F,A,E
	Tranni & Torresi	325	A	A	D	A,C,B

Contd/

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FORCE ROAD TRANSPORT SURVEY - FINAL CASE LIST

Country	Company	Fleet Size	Category of Transport	Type of Firm	Product	CVT
Luxembourg	Kühne & Nagel	>50	A	A	D	C
Netherlands	Anonymous	12	A	A	F	A,E,D,C
	Menken van Grieken	26	A	B	A	B,C
	GPdW	0	0	0	0	E,C,A
	Anonymous	150	C	C	H	A,E
Portugal	Luis Simões	200	A	A	A	C,A
	Amaral e Frias	60	A	A	A	C
	Workshop		A	A	D	G
United Kingdom	Lane Group	300	A	A	D	F,A,B,C, E
	Royal Mail	28000	B	B	G	F,C,E
	Du Pont		A	B	B	D,C,B,E
	Langdon	78	A	A	A	B,C,E
	Transport Develop' Grp	100	A	A	D	C,D,A,B
	Anonymous	1918	C	C	H	C,F
	Lucketts Travel	32	C	C	H	C,A,B

Category of Transport	A=Freight Transport	B=Mail & Parcel delivery	C= Other	
Type of Firm	A=Hire & Reward	B=Own Account	C=Private Passenger	D=Other
Product	A=Agrifoodstuffs F=Furniture Removal	B=Fuels/Chemicals/Petroleum G=Mail/Parcels	D=Manufactured Prods H=People	E=Fertiliser I=Money
CVT	A=Customer Service E=Quality Delivery/JIT	B=Product Specific F=Safety	C=Driver Skills G=Skill Need Analysis	D= Logistics

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1.6 THE CONTEXT

Each case study was assessed against a background of the company's general business activities and the relevant national sectoral study. This provided the appropriate context for the case study evaluation and was necessary before any overall conclusions could be drawn for the European report.

There is a focus on the forces which are driving change within the sector and on the ways in which each company is adapting to meet those changes. The role of training in this adaptation is then analysed.

1.7 PERFORMANCE OF THE SURVEY

The research and reports for the sectoral analyses and the case studies were carried out by thirteen national research teams (two for Belgium). Research was based on the guidelines as outlined in the Methodological Memoranda. Essentially, personal interviews were held on site by the rapporteurs with a cross section of Management, Employees and industry representatives. Some case studies required several visits to the company site and a certain number of the companies were reluctant to contribute more than one session to the study or to provide all of the information which was requested.

Changes were made to reports according to the feedback from the national rapporteurs and the advice of the Monitoring Committee. A quality control system was employed under which all draft reports (cases and sectoral studies) were reviewed and compared against the agreed Methodological Memoranda and the objectives of the study. Quality Control also aimed to produce comparable reports where possible, so that the final synthesis report could be more meaningful.

2 - NATURE OF THE ROAD TRANSPORT SECTOR IN THE EC

INTRODUCTION

This section profiles the nature of the road transport sector. An economic analysis of the structure of the sector is presented, followed by a description of the forces of change which are at work and the business strategies that road transport companies are adopting. Certain factors which are influencing the development of the sector are then examined, including the impact of international competition and the single market and the role of small road transporters versus that of the large multinationals.

Throughout the section examples are used from the case studies to highlight the points being made. These are enclosed in shaded boxes and they are also utilised throughout the remaining chapters of the report.

2.1 STRUCTURE OF THE SECTOR

In this sub-section the structure of the road transport sector in the European Community is profiled. An economic analysis is presented in terms of:

- the size and growth of the sector;
- transport mode shares and trends;
- national and international road transport and Hire & Reward versus Own Account

2.1.1 Size and Growth of the Sector

The role of transport within the economy is becoming more and more important. Decades of economic, technological and other innovations have led to a more internationally minded society. Advanced machines, supported by fast and increasingly integrated information and communication equipment, are enabling industries to market their highly customised products at the shortest possible delivery times. Simultaneous changes within the transport sector, such as increased capacities and speeds, standardised transport systems, and raised frequencies, have enabled an international and even world-wide division of tasks and the processing of goods flows on that basis.

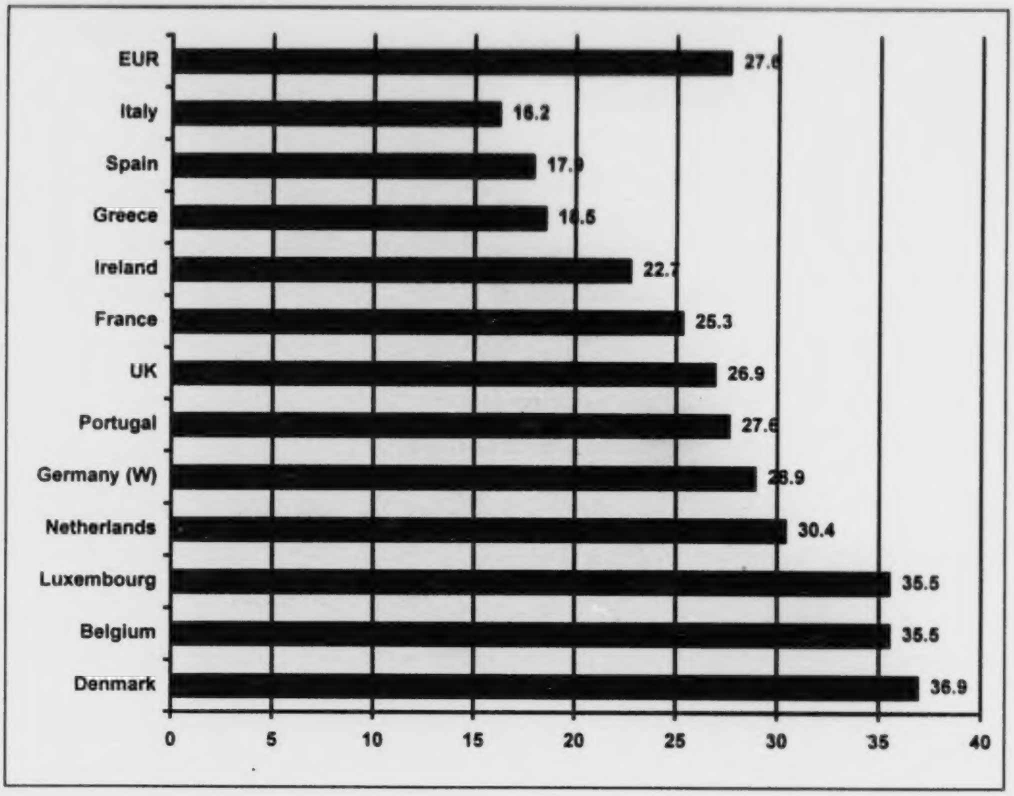
Demand for goods transport has increased. The direct cause is the increased consumer demand for finished products, in terms of volume as well as variety. Another factor is the price/quality ratio of haulage which compares favourably to that of other cost factors such as raw materials, land and labour. On account of the relatively low cost level and the flexibility of transport, many companies have begun to locate the production functions in areas with comparative cost advantages and to transport semi-finished, finished and commercial products across longer distances.

The demand for road transport is not only stimulated by the developments described above, but also by the improvement of the position of road transport within total transport. Compared to other transport modes, road transport scores highly on availability, flexibility, frequency and speed. Section 2.1.2 will elaborate further on this point.

Two indicators are normally used to measure the size of the road transport sector: transported tons and tonkilometers (tonkms). The last indicator could be seen as more "sophisticated", because it also takes the distance of transport flows into account. One disadvantage of both indicators is that it strongly concentrates on transported weights. This means that developments towards other distributional and logistic services carried out by the sector are not fully reflected. However, the tons and tonkms still give a good indication of differences between countries in size of the sector and the growth that has taken place in the sector. These kind of production data are not always available for all EU-countries. The construction of series is particularly difficult, because for some countries production data are only recently available.

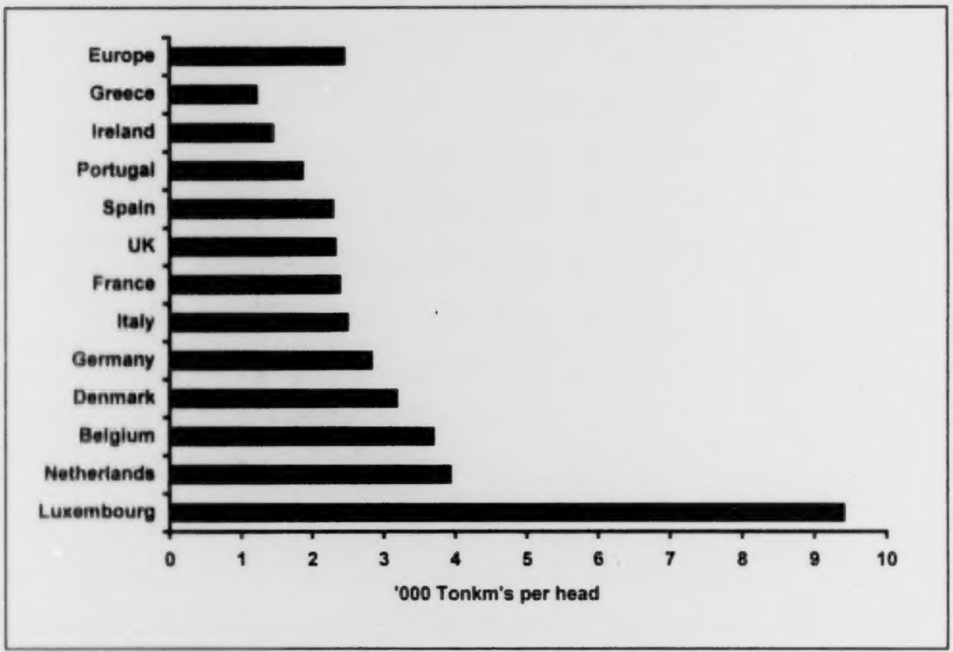
Figure 2.1 illustrates the differences in relative size of the sector per country. In figure 2.1a, the tons per head of population are given, whereas in figure 2.1b, the tonkms per head are given. Road transport is relatively strong in the four smaller northern EC-countries with open economies and a lot of trade activities: the Netherlands, Belgium, Luxembourg and Denmark. Luxembourg scores extremely high in tonkms because many foreign companies were attracted by the terms of settlement and the fiscal advantages offered by Luxembourg, even though they hardly engaged in transport operations from Luxembourg at all. They entrusted the transport of their raw materials and their finished products in part or even completely to road (reference the Luxembourg National Report) often for longer distances.

Figure 2.1a Tons carried by road transport per head of population in the separate EU-countries (thousands)



Source tons: Eurostat, carriage of goods, road, 1991

Figure 2.1b Tonkms carried by road transport per head of population (thousands) in the separate EU-countries

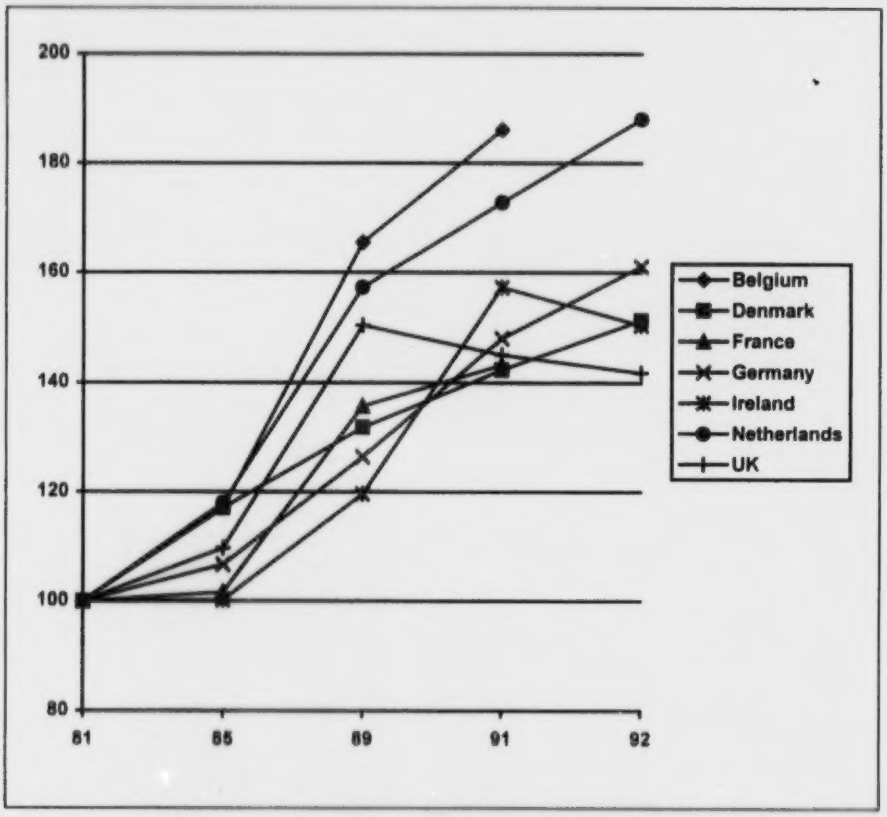


Source tonkms: Road freight transport in the single European market. Report of the committee of enquiry - July 1994
For some countries 1991 figures are used.

Ireland, Greece and Portugal have relatively low scores. The peripherality of these countries means limited international road transport. Ireland is an island, Greece is not an island, but the Yugoslavian war means that road transport to other EU-countries has to make use of the (expensive) sea connection with Italy. Because the three countries are also relatively small, national transport distances are more limited than in other countries. This is probably why their low position is more explicit in tonkms than in tons, in contrast to a larger country like Spain.

The growth in road transport which already has been mentioned is illustrated in Figure 2.2 for a number of EU-countries. Road transport nearly doubled in the period 1981-1992 for the Netherlands and Belgium. For most other countries, the sector grew by 40-50%. The only exception in the depicted countries is Ireland with a limited growth.

Figure 2.2 Development of road transport of different EU-countries, expressed in indices (1981=100)



Source: For 1981-1991, Eurostat figures have been used; for 1992 is made use of Road freight transport in the single European market, Report of the committee of enquiry - July 1994.

The growth has been strongest in the second half of the eighties. The transport sector - heavily related to volume of other economic activities - profited from the economic recovery in most EU-countries.

The picture at the beginning of the nineties is more diverse: in most countries the volume of road transport is still increasing. Exceptions to this picture are Ireland, Greece (war in Yugoslavia) and Spain[1].

For the future, the growth of the sector is expected to continue. Quantitative prognoses in the Netherlands and Germany point to an expected doubling of production until the year 2010/2015.

The figures of this sub-section have illustrated the strong growth of road transport. Attention to continuing vocational training in this more and more important sector is therefore very much worthwhile.

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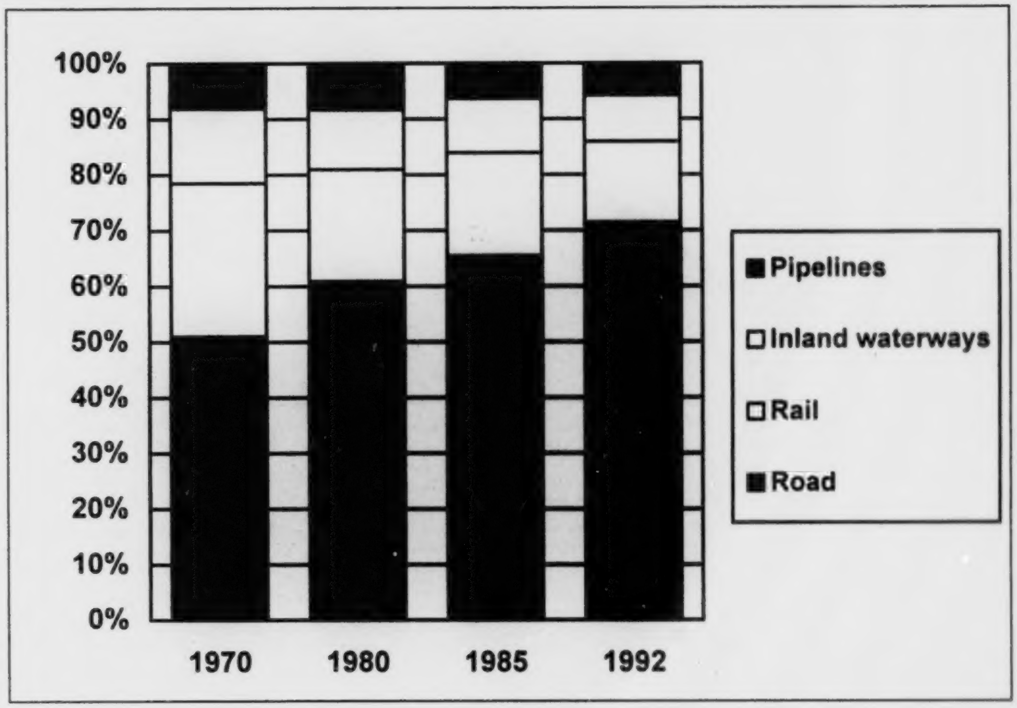
[1] The unrealistic strong drop in case of Spain causes doubt about the quality and/or comparability of the statistics for Spain

2.1.2 Transport Mode Shares and Trends

Data on goods carried by different transport modes is collected by DG VII with the help of Eurostat. Because these figures are available for several years, it is possible to see movements between transport modes over a long time period. Figure 2.3 illustrates the continuously growing importance of road transport in the period 1970-1992. The proportion of road transport in the available figures on tonkilometres has grown from 51% in 1970 until 72% in 1992.

Figure 2.3 EU-Trends in the modal split between road, rail, inland waterways and pipelines



Source: DG VII in co-operation with Eurostat

1970: excluding Portugal, Ireland

1980: excluding Greece

1985: excluding Portugal

The collected figures by DG VII contain consistent figures within countries, but not between countries. For example, in some countries road transport only includes national transport, while for other countries international transport is also included. This is why comparisons between countries cannot directly be made. But still, the figures indicate that the relative importance of road transport differs per country. Traditionally, Germany, France, Belgium and Luxembourg also make a lot of use of rail transport, although the amount of rail transport even decreased in absolute figures in the period 1970-1992 in these countries. Inland waterway transport is relatively strong in the Netherlands, Belgium and Germany. In all the remaining EUcountries (Denmark, Ireland, UK, Spain, Portugal, Italy and Greece) the position of road transport is very strong in inland transport. The figures clearly show that the growing relative importance of road transport is a general trend for all EU-countries.

To understand the backgrounds of the development towards road transport, it is useful to compare the characteristics of the various transport modes ie. to compare their advantages and disadvantages (Figure 2.4, taken from European Economy, Social Europe, 1993). Suitability refers to how easily a transport mode can be used for various product categories. The availability indicates how well the mode links various consumption and production locations.

Figure 2.4 Characteristics of Various Transport Modes

Transport mode	*Suitability*	*Availability*	*Price*	*Reliability*	*Frequency*	*Speed*
Road haulage	0	+	-	0	+	+
Inland waterway	0	-	+	-	0	-
Rail	+	-	0	0	-	0
Pipelines	-	-	+	+	+	-
Sea	+	-	+	-	-	-
Air	-	-	-	-	0	+

"+" means that this transport mode scores relatively good on this criterion, "-" is a relatively bad score and "0" is in between.

Source: *Commission of the European Communities, European Economy/Social Europe, Reports and studies, 1993. (p254)*

The crucial point for the shift in modal split is that road transport scores well on those criteria that have been gaining in importance. Given a certain production level, firms will attempt to minimise total logistical costs. Total logistical costs consist of transport, handling and inventory costs. As transport costs per mode are only weakly related to the value of goods and predominantly determined by their weight, whereas inventory costs are directly linked to the value of goods, one can state that, the higher the unit values are, the more attractive it is to step up spending on transport quality (availability, reliability, frequency, speed) in order to reduce inventory costs. Processes of miniaturisation and increased use of new materials and information technology have lead to a general increase in value-weight ratios of transported goods. By contrast, the production of heavy bulk goods which are transported by rail or inland navigation continues to fall. Moreover, new computerised systems of inventory control have decreased the costs of inventory and consequently increased the attractiveness of the high transport quality/low inventory cost option ("just-in-time"). It will be clear that road transport is well suited to the increased importance of transport quality: the score on the criteria availability (door to door), reliability, frequency and speed is relatively good.

Another important trend is the increased differentiation in products as part of "customer service". This leads to differences in products concerning factors like perishibility, volume/weight ratio, value/weight ratio, packaging, distance, etc. The consequence is an increased demand for more frequent, smaller shipments, which can be particularly well satisfied by road transport.

Another factor influencing the change in the modal split ratio in favour of road transport is the relative inability of rail and inland water transport to respond quickly and flexibly to changing demand. The limited infrastructure for other transport modes is another factor in favour of road. Moreover, road transport has profited strongly from the drop in energy prices in the second half of the eighties. Together with the trend towards the more efficient hire and reward, road transport has lead to improvements in the weak point of road transport: its relatively high price.

The development of the modal split position of road transport also depends on investments in road-infrastructure and regulations. In October 1993 the Council of Ministers, in line with Article 129 of the Union Treaty, adopted a trans-European road network (TERN) as the official road network of the union. This involves, among other things, the completion of 120 missing motorway links, involving 12,000 kms. Combined transport of road and rail transport has expanded rapidly, and particularly in the second half of the eighties, but its market share remains very small, and its future growth will depend among other things on overcoming current capacity constraints and the success in increasing flexibility in rail transport. Close co-operation between national railway organisations is a necessary condition for this.

The future influence of (changes) in regulations could influence the share of road transport both in positive and negative way. Deregulations like increased possibilities for cabotage will increase competition and could therefore lead to lower prices, especially for countries with a heavy regulated market (Germany and to a lesser extent Italy). On the other hand, the growing "green" concern could lead to actions of governments and the EU which lead to higher costs for the road transport. These higher costs are seen as sort of social costs which road transport should carry because of negative external effects of the environment pollution caused by road transport. These higher cost can be achieved by levies, higher (diesel) fuel prices, emission restrictions, etc.

Future developments in the modal split will depend on changes in the nature of demand, changes in infrastructure and regulatory regimes (Road freight transport in the single European market; report of the committee of enquiry - July 1994).

Concerning the first point: the increase in demand for flexible highly reliable services is expected to persist, which will strengthen the position of road transport. The mix of fares which influence the development of road transport is discussed in more detail in Section 2.2 Forces of Change in the Sector.

The overall conclusion of this sub-section is that the position of road transport compared to other transport modes is increasing. The reasoning behind this is that road transport scores well on factors like flexibility and speed that are becoming more and more important.

2.1.3 National Vs International, Hire And Reward Vs Own Account

National Vs International Road Transport

Figure 2.5 illustrates that the most important part of road transport is still national with just under 21% of all tonkilometers made by EU-countries accounted for by international transport (1991). Measured in tons, this proportion is even smaller.

Looking more closely to the proportion of international road transport in the separate EU-countries in 1986 and 1992 leads to two important conclusions (figure 2.5):

- Although the proportion of international transport is low, this proportion is increasing. For the EU as a whole, the proportion has grown from 18 to 21 percent in the period 1986-1991. This growth reflects the internationalisation and growing integration of the EU economies. Moreover, road transport succeeded in improving its share of the growing international trade, in comparison to other modes (rail, ship).

- The proportion of international transport differs per country. The countries with the relative strongest developed road transport sector (see section 2.1.1) also have the highest proportion of international transport: Luxembourg, Belgium, the Netherlands and Denmark. All four are small countries with an open economy. The proportion of international transport is strongly increasing in Portugal. Politically, Portugal changed from a colonial power to full integration in the European economy in 1986. This stronger link with Europe, naturally led to the development of exchanges with the community, especially with Spain. Modernising road transport networks also had a positive influence (sectoral report Portugal). The proportion of international transport is still low in Germany, Spain, Italy, the UK and Ireland. The isolated position will play an important role for the last two countries. Germany and Italy both have relatively "regulated" transport markets which limits completion in national markets and probably consequently limits competitive strength in international transport[2].

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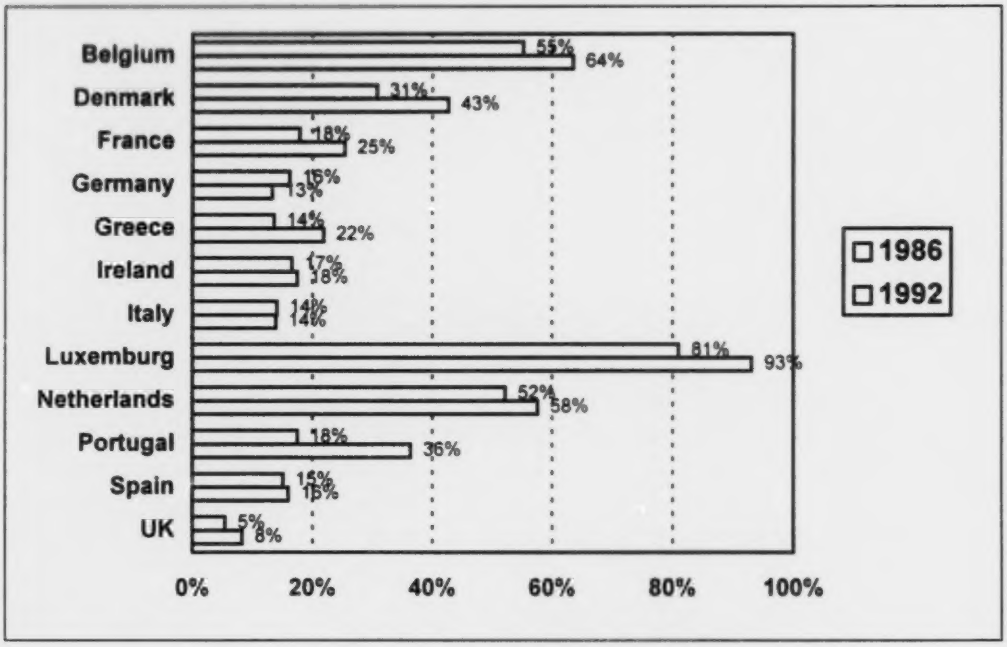
[2] Illustrative of the difficult position of Italy in international transport is the fact that the share of Italian carriers in traffic from and towards Italy has fallen from 50% in 1979 to 32% in 1989 (sectoral report Italy).

Figure 2.5 Proportion of international transport in total road transport (in tonkms)



Source: Road freight transport in the single European market, Report of the committee of enquiry, July 1994. For some countries 1991 figures are used instead of 1992.

Note: International transport to third countries outside the EU is not taken into account. If these figures had been available, the proportion of international transport would have been (a little bit) higher.

Hire and Reward Vs Own Account

Another important division which can be made in road transport is between hire and reward and own account transport. Own account transport is carried out as a support service to a core business. These companies do not outsource their transport needs, but fulfil them in-house. Road transport of freight is the core business for companies who are classed as hire and reward.

In 1991, nearly three quarters of all road transport (measured in tonkms[3]) in the EU was carried out by hire & reward companies. In all separate EU-countries, hire & reward carries out more than half of all tonkms. The share of hire & reward is relatively high in Spain, Italy, the Netherlands and Denmark.

Figure 2.6 shows that in nearly all countries the proportion of hire & reward transport is increasing. The most extreme example is Ireland, in which the proportion rose from 42% in 1985 to 65% in 1991. The subcontracting trend is due to the growing need among companies to dispose of activities that are not counted to their core tasks, such as transport, storage of goods and stock control. Some arguments of shippers for sub-contracting transport and related activities refer to the relative cheaper wages within hire and reward, the inefficiencies of own account transport (sub-capacity loading), the possibility of flexible transport costs, and the professional know how for effective and efficient control of the transport process.

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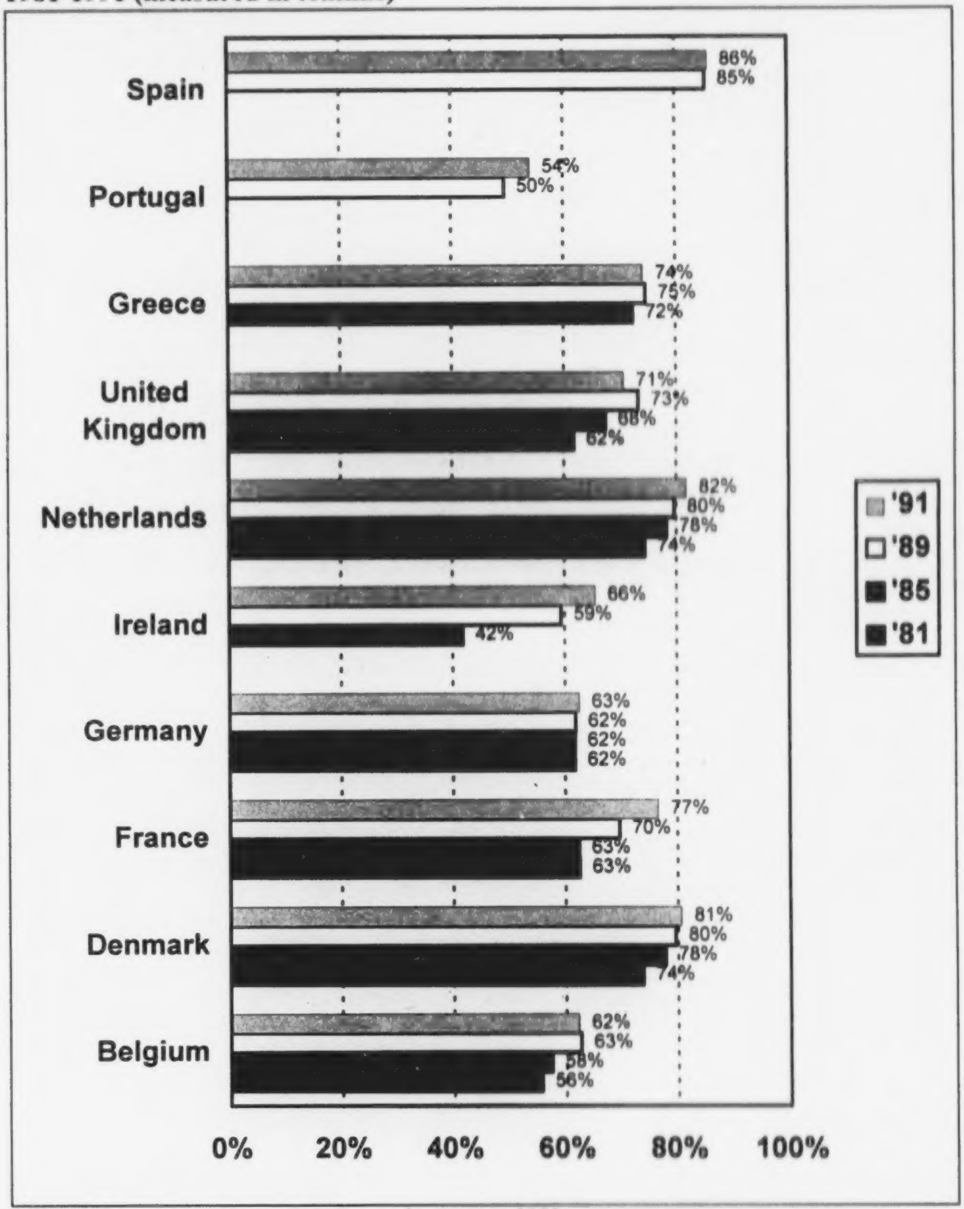
[3] Measured in tons, this proportion is 51% in 1991.

Figure 2.6 Proportion of hire and reward in total road transport in the period 1981-1991 (measured in tonkms)



Source: Eurostat, carriage of goods, road transport, 1991

Note: International transport to third countries outside the EU is not taken into account. If these figures would have been available, the proportion of hire and reward would have been higher.

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Outsourcing logistic services is not a new concept - what is new is the greater linkage between companies and their external logistics service provider plus the trend towards value added distribution where service providers tailor their product to meet customers needs.

2.2 FORCES OF CHANGE

There are various change drivers or 'forces of change' that have strongly influenced the development of the road transport sector across Europe. Such forces are taken into consideration by transport operators when shaping their business strategies for the future. The main forces of change include concerns over safety, developments in technology, demands on service quality, legal requirements and changes, changing customer demands and concerns over the impact of road transport on the environment. These are evident from the national reports and from published reviews of the sector and each of them is explored in detail below.

Following this overview of the forces of change in the road transport sector, Section 2.3 Business Strategies then analyses the strategies that road transport companies have adopted to respond to these forces of change and the general commercial environment across Europe.

The forces of change that are currently influencing the development of the road transport sector are summarised in Figure 2.7 and are discussed separately in the following text.

Figure 2.7- Forces of Change in the Road Transport Sector

Safety Issues	- driving time, speed and distance
	- vehicle construction and testing
	- regulations for drivers and road standards
Technology Developments	- admin & operations, IT & EDI
	- vehicle technology
	- road infrastructure
Quality Issues	- ISO Certification
	- customer demands and customer care
	- impact of new technologies
Legal Requirements and Changes	
Flexibility and Customer Demands	
Green Issues	- transit traffic
	- pollution
	- fuel efficiency
	- alternative transport modes

2.2.1 Safety Issues

In its report on Road Freight Transport in the Single European Market (July 1994) the Committee of Enquiry made recommendations relating to the social framework that surrounds the sector. It stated that "the social regulations are intended to protect those engaged in the profession in terms of their working conditions, and the public in general in terms of their safety, while at the same time harmonising the conditions of competition between Member States".

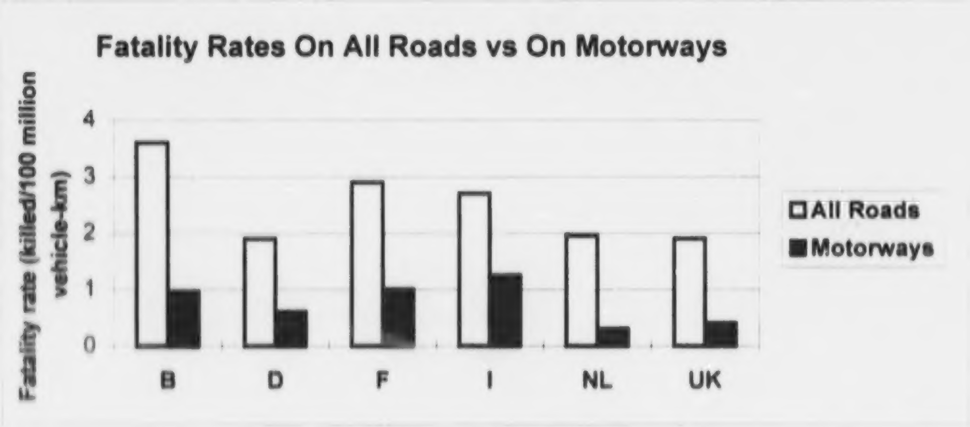
The Committee of Enquiry expressed concern regarding the complexity of existing regulations and the widespread infringement and avoidance of them. They recommended that "on the grounds of safety and market distortion, immediate action needs to be taken to redefine, harmonise and enforce the regulations" and that the issue be dealt with by the Joint Committee on Road Transport in close co-operation with the European Commission.

To date the principal safety regulations relate to:

- maximum driving hours: limits are set in relation to the number of hours per day, week and fortnight that the driver is at the wheel, and the timing and length of breaks from driving. The tachograph has consequently been developed for use in both passenger and freight vehicles. It automatically records vehicle speed, distance travelled, driving time and other relevant information;
- vehicle construction, minimum tyre-tread depth for private cars, the periodic testing of vehicles including harmonised standards for testing brakes; and
- general standards for obtaining a driving licence, the wearing of seat belts and speed limiters for heavy vehicles.

Standards for motorway construction and maintenance are also important in terms of road safety as research has shown that on average motorway travel is three times safer than any other road travel. Figure 2.8 below illustrates this point.

Figure 2.8



Source: Bruhning/Alevisos, 1991

Motorways and general roads can influence safety depending on their characteristics. Examples of such characteristics include skid resistance of road surfaces, day and night visibility of markings, road signs and road fittings such as crash barriers and shock absorbers.

Other factors have an influence on road safety, such as technological developments, the existence of rest and service areas along routes, emergency call points and traffic information.

Traffic congestion also has implications for safety levels: the average annual Community traffic rate per day could climb from 19,000 in 1990 to between 33,000 and 44,000 vehicles in 2010. In the case of motorways, the figure may jump from 25,000 to between 38,000 and 49,000. This would mean that bottlenecks could increase by three to five times, with a corresponding increase in tailback traffic. (Source: Trans-European Networks: Towards a Master Plan for the Road Network and Road Traffic - Motorway Working Group Report May 1992).

Greater care will therefore have to be taken to manage traffic flows and in particular to manage the increase in stress levels which can result from traffic congestion.

Driver Attitudes Affect Safety

The UK sectoral report pointed out that the attitudes of drivers can seriously affect the likelihood of accidents. It quoted the Group Transport 2000+ report: "Drastic measures should be taken to reduce the 50,000 dead and 150,000 injured on European roads every year. Technical measures will not be enough ... Driver attitudes will also have to be taken into account."

The UK case study of A Passenger Transport Group illustrated how companies can design training to deal with driving skills:

"Interactive video is employed in the field of road skills training. Much of the situational training necessary to underpin service quality is difficult to provide on the public highway, due to safety considerations.

Defensive driving skills can be effectively learned with the aid of interactive video simulation. Participants are presented with video images depicting typical traffic situations and the driver reaction is controlled via the computer keyboard. The outcome of the corrective action taken by the driver is shown on the screen. Participants particularly value the facility for an assessment rating of defensive driving competence given at the end of the programme."

Apart from the issues mentioned above, there is the issue of the carriage of dangerous goods by road. This has clear implications for safety where accidents and/or spills occur. However it is an area which has been dealt with under the European Agreement Concerning the International Carriage of Dangerous Goods By Road (ADR), so that employees of companies involved in this type of freight transport are now required to be capable of dealing with dangerous substances in all types of situations. Under the ADR, before appointing a driver the carrier must ensure that he has received adequate training and instruction on the safe conveyance of dangerous substances over and above those which are necessary to attain a standard of competence required to drive a goods vehicle. The additional training includes tuition in the area of:

- general requirements governing the transport of dangerous substances;
- the main types of hazard;
- preventative and safety measures appropriate to the various types of hazard;
- action to be taken after an accident;
- labelling and marking to indicate the precise danger imposed by the goods in transit;

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- the correct procedures to be followed by a vehicle driver during the carriage of substances;
- the purpose and method of operation of technical equipment on vehicles; and
- the behaviour of vehicles carrying tanks or tank containers on the road during movements of the load.

Case Example: Du Pont RHYTHM (Remember How You Treat Hazardous Materials)

Within the UK, Du Pont's Stevenage site has become the training centre for all European staff with regard to safety and transport. With the help of external consultants and a trade association the RHYTHM training courses have been developed. Regular in-house training programmes were initiated in Europe in 1987 and have expanded in terms of content and numbers of employees participating since then.

The course for the transport of hazardous goods within the RHYTHM programme incorporates two and a half days training which is supported by both visual material and work books. All tuition is tested by written examination at the end of the course. The course content includes a balance of information dissemination and exercises carried out by the delegates.

Whilst being aware of the volume of legislation regarding carriage of goods, Du Pont's training programme has been based on the overall aspect of moving dangerous safely rather than merely fulfilling the company's legislative obligations.

Implications for CVT

In order to benefit fully from these safety regulations and standards, companies may wish to include a training module on safety issues as part of their CVT programme. Harmonisation of safety regulations will simplify the teaching process as only one set of rules would have to be taught for all road transport activity in the EU. It would also allow trainers more time to concentrate on safety issues such as preventive driving techniques and road markings.

By training drivers (who are the principal target group) in the area of safety, road transport companies may reduce their transport costs in terms of crash repairs, insurance payouts, fines etc and improve their customers service reputation in terms of reliability. Safety training therefore is also justifiable on economic grounds - as well as the fact that it enables companies to meet their legal obligations and social responsibilities.

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Legislation requiring the training of employees in the carriage of dangerous goods has resulted in many small road transport companies engaging in training for the first time. The larger companies who are regularly engaged in transporting dangerous substances would already have had their own training programmes.

2.2.2 Technology Developments

Technology developments are generally occurring in three main areas:

(i) administration and operations
(ii) vehicle technology
(iii) road infrastructure

The majority of sectoral reports discuss technological change in the administration or operations area, with some reference to vehicles but very little to road infrastructure. The reason for this is that administration/operations area is the one over which road haulage companies would have the most control as it is physically situated inside their buildings and any increased therefore directly affects their own budgets.

Some influence can be asserted by road hauliers over the vehicle manufacturers and close communications can be maintained but in general the hauliers tend not to become too involved in the actual development of the vehicles. Greater involvement in vehicle developments might be seen in companies who are following specialisation strategies and need specialised vehicles - such as those involved in the transport of frozen or fresh food.

Likewise, the development of road infrastructure is not within the direct control of the road transport companies although they may lobby for improvements.

(i) Administration and Operations

Companies are now finding that information technology (IT) and Electronic Data Interchange (EDI) can help them to satisfy increasing customer demands for stock control, client-company communications, on-line tracing capabilities, just-in-time deliveries and cost-effective distribution network management, etc.

Satellite tracking systems provide an example of a powerful development in transport technology. It has facilitated many companies in the re-engineering and general improvement of their operations. Satellite transmissions enable messages to be transmitted between central offices and trucks, i.e. to individual trucks or simultaneously to groups of trucks. It is also possible to pinpoint the position of the vehicle at any stage. The advantage of this is that the traffic controller can advise the driver to change direction to avoid delays or to reroute to make another collection/delivery.

Satellite Tracking Example: The EUTELTRACS system

The Euteltracs system provides the capability to transfer typed messages from the home base to the trucks and vice-versa. Communication is established via satellites which follow the Earth in a fixed orbit. The satellite covers the whole of Western Europe, Eastern Europe up to Moscow, Turkey and the Mediterranean area.

For communication with the home base the truck is equipped with a mobile communication terminal consisting of a small screen with a keyboard, a transceiver unit and a satellite antenna placed on the roof of the cabin.

Computerisation on board vehicles and in warehouses also means that tight controls can be kept on thermostats in temperature controlled areas and on electricity connections and that quality controls can be enforced more accurately.

Developments in communications systems, such as the digital network of Global System for Mobile telephones (GMS), are also expanding rapidly as they enable easier and more direct contact across Europe, South Africa, Hong Kong and soon Australia - with an ever expanding network. The rapid growth in GSM subscribers in Western Europe alone is demonstrated by the fact that circa 1.2 million subscribers existed at the start of 1994 and this total had increased dramatically to 4 million by the end of the year.

The overall impact of the development of transport technologies through IT has been that the larger transport companies can now provide a better service over a wider distribution network. Their customers, who are following global strategies, can now focus on the manufacturing and selling of products while the transport company takes care of its logistical requirements on a highly efficient and effective basis. The customer still remains close to the logistics function as he can at any stage request and receive real-time data on the whereabouts and levels of stock.

The European Commission has played a key role in encouraging advances in communications technologies and their integration with commercial environment. Initiatives such as the Euteltracs Satellite Tracking System and DRIVE are two examples of such support for the EU.

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EU Initiative Example: DRIVE

DRIVE: Dedicated Road Infrastructure for Vehicle Safety in Europe

Duration; 3 years of the Second Framework Programme, continued within Telematics in the Third Framework Programme and likely to be continued in the Fourth Framework (1994-88)

The main objective of DRIVE is to develop telematics technologies and systems to improve road safety, maximise road transport efficiency and contribute to environmental improvement.

All of the sectoral reports have pointed to the need to re-train drivers as a result of IT and vehicle developments. By training drivers in these areas companies can better realise the competitive advantages and economic benefits that derive from technological advantages. One practical example is the availability of information on truckloads so that full capacity can be maintained as far as possible.

For those countries who have a relatively high percentage of small operators within the road transport industry, technological change can represent a threat to their future international competitiveness. Small companies cannot justify expensive investments in IT or advanced communications systems until they grow to a certain size. This means that the polarisation in terms of size of firms will be emphasised as investments in technologies are made by the larger companies - i.e. the technological barrier to new entrants is increasing.

Countries with underdeveloped road transport industries, such as Italy and Greece, will find that their competitiveness will deteriorate even further and faster as they miss out on technological developments and skill enhancements. Italy has noted that the state of its vehicle fleets, the small size of its road transport companies, the lack of skills and poor productivity levels has already led to its losing market share in international transport. In 1979 the share of traffic to and from Italy was 50:50 across national and foreign carriers. The Italian sectoral report states that in 1989 the share of Italian carriers was down to 32%, even though European road transport was increasing substantially (1981-92 saw the road transport sector almost double in the Netherlands and Belgium and increase by 40-50% in most other countries - see Section 2.1 of this report). These are worrying trends for Italy and that country is now beginning to realise the need for keeping up with technology developments.

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(ii) Vehicle Technology

Developments in vehicle technology have led to better fuel efficiency, lower emissions (CO2, Nox, CO etc) and quieter engines. Vehicles have become easier to drive and more sophisticated in their capabilities. In the UK a labour market survey for the road haulage and distribution industry established that "changing vehicle technology" was considered to be one of the most significant factors expected to have an impact on the sector over the next few years.

Change in vehicle technologies requires drivers to broaden their skills. It is now important for drivers in general transport companies to have experience of driving various types of vehicles so that flexibility in service is possible. In addition, they need to learn about the technological innovations and how the new vehicles should be driven. In this regard, changes such as low speed vehicles, servo-assisted steering, advanced loading procedures and vehicle stabilisation mechanisms will all have an impact on the driver. As one sectoral report put it, the driver is in control of "an expensive technological product".

(iii) Road Infrastructure

Developments in road infrastructure, such as the Trans-European Road Network (discussed later in Section 2.4.2) which is planned to be built by 2010, will obviously have impacts on road transport operators. Logistics managers and drivers need to know if driving routes have been changed and if the new infrastructures provide opportunities for shorter, safer transportation journeys. However, technological developments in terms of the materials used and the actual building/repair of roads also affect the capabilities of the transport companies. Road quality affects fuel costs and vehicle care. The Irish Road Haulage Association for example has indicated that poor road quality means that Ireland incurs costs 25% higher than those of the UK and repair costs are also higher.

Technology developments in relation to road infrastructure is therefore an important issue - although it is not one which the smaller road transport companies can control individually. Road transport organisations and the larger road transport and logistics companies can lobby for improved road conditions and infrastructures and they can also get involved in research on road surface materials.

Implications for CVT

Technology developments in the sector introduce relatively new topics for CVT courses. There are initial training courses available now covering developments in logistics, EDI, IT etc. However, many existing employees will not be familiar with the principles behind these topics or with the latest techniques. They need to be trained so that companies can adapt to the new techniques and remain competitive. The road transport firms appear to be reacting to developments through a combination of recruiting specially qualified personnel and training existing personnel.

In general, the employees being trained are not the drivers. Route planners and logistics managers, warehouse personnel and administration staff are directly affected by the developments in software packages, EDI, IT etc. Drivers may also be trained in the management of new vehicles - training which is often given by the vehicle manufacturer as part of a sales deal. In contrast, developments in road infrastructure will not normally need to be taught as part of the CVT courses.

2.2.3 Quality Issues

Methodological Memorandum IV (MMIV) outlined the desired structure for each of the case study reports within this Force study. One of the specific areas outlined for examination during the company analysis was the impact of quality standards on the firm's operations. Similarly, Methodological Memorandum III (MMIII) for the national sectoral reports required an examination of the issue of quality in terms of: the current status and anticipated changes in standards, certification and customer service across the sector.

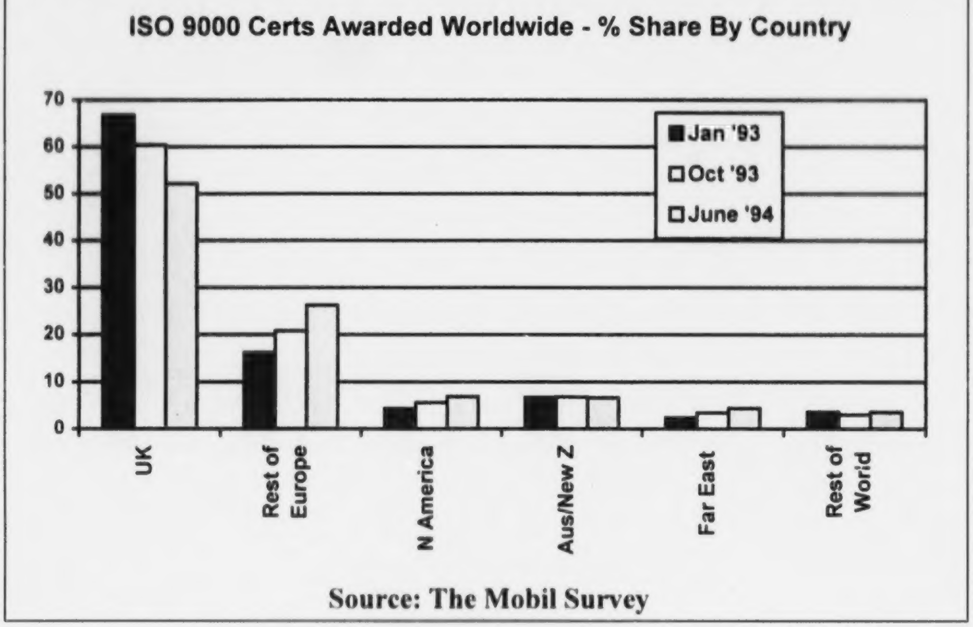
In addition to these requirements, many rapporteurs have gone one step further and emphasised the importance of quality issues in the concluding sections of their reports. However, it is interesting to look first at the growth in the level of certification under the ISO 9000 regime before presenting the general view of quality as a force of change in the road transport sector.

ISO 9000 Certification

ISO 9000 (ISO: International Organisation for Standardisation) is a set of generic standards that provide quality assurance requirements and quality management guidance. The standards include a broad range of quality system elements and companies endeavour to register to one of the three conformance standards of ISO 9001, 9002 or 9003. In general road transport and manufacturing companies would be focusing on achieving ISO 9002. Design and consultancy companies would be seeking ISO 9001 while ISO 9003 would normally relate to the operations of small retail type organisations.

The figure below illustrates the achievement of ISO 9000 certification by country in recent years and is therefore an indicator of the growing interest of companies in providing a quality service and in utilising the certificates to their advantage.

Figure 2.9



Source: The Mobil Survey

Each bar indicates additional ISO certificates awarded in each year to that country as compared to other countries in the same year. The total number of ISO 9000 certificates up to the end of June 1994 was estimated at 70,517 spanning 76 countries.

Thirty four countries contributed to certifications across the 'Rest of Europe' as shown in the graph. Of these, the countries which had over 1000 certificates included Germany, the Netherlands , Italy and France . Eastern Europe currently has a much lower base - for example Poland had circa 10 in June '94, Slovakia 11 and Hungary 58. The UK is clearly the most advanced country in terms of achieving certification. Even starting from a high base the UK figures have doubled over the eighteen month period to June '94. The Mobil Survey also showed that ISO Certification bodies are continuing to increase operations on a global scale.

At this stage it is not possible to identify how many of the ISO 9002 companies were specifically involved in the road transport sector. However the national rapporteurs accounts of the general interest by these companies in the whole area of quality are very informative.

Case Example: Two German Companies Adopt ISO

The German case study, Edgar Grass GmbH & Co., illustrated how the achievement of the ISO 9002 quality standard can be a key element of a company's business strategy. Edgar Grass achieved ISO 9002 in order to differentiate itself from low-cost one-person truck operators and to combat competition in general. The certification enabled better and more transparent work processes. Audits on ISO 9002 have highlighted weaknesses and these are addressed via specially designed training programmes. ISO 9002 is also used to train new employees on the operations of the company. Edgar Grass sees the ISO 9002 certification as a "pre-requisite" for meeting the increasing quality standards and expectations of the future.

Another German company covered as a case study, Trans-o-flex AG, decided to obtain the ISO 9002 certificate because many of their suppliers and customers had already been certified. The company developed a concept of "success-oriented CVT" so that it could cope with the standard of service required under the ISO regime.

The case examples presented within this section illustrate the wide range of approaches of road transport companies towards the adoption of quality management and the achievement of quality certification. However, it is also possible to extract some points that were common to almost all of the national reports and these are presented below.

(i) Effectiveness of ISO Certification

The national reports and statistics above illustrate that many company's believe ISO helps them to focus on quality and on the training of staff. There is however a certain strand that believes that ISO 9000 is too inflexible and bureaucratic and actually distracts them from satisfying customer requirements.

The example provided overleaf illustrates the attitudes to quality within Ireland and the UK.

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Case Examples: ISO & Customer Care in UK and Ireland

An interesting case study from the UK, Lane Group Plc, presents a training programme called "Quality on the Road". The company has developed a Total Quality Management system that encompasses the monitoring of customer service levels and the management of staff performance. The Lane Group has a policy of providing products and services that meet in full all relevant criteria, including:

- the customers' own requirements and specifications
- their own product and service specifications
- any legal or other approved specifications of industry codes of practice which may apply.

The Lane Group quality system ensures that they can understand customer requirements and always use materials and equipment of the required quality.

Interestingly, the Lane Group have recently withdrawn from the ISO9002 registration, believing that it has not added value to their business. They are, however, pursuing "Investors in People". This is the national standard aimed at helping businesses and organisations in Britain to improve their performance by adopting a more systematic approach to training and developing their employees.

Another UK case, Royal Mail, presents a training programme called "Maildrive". This incorporates twenty five modules, many of which aim to indirectly improve service quality and one of which is specifically called "Quality Wins Customers". Royal Mail reports that both its vehicle workshops and operational units have benefited from internal quality programmes and also from external accreditation under ISO9002.

One Irish company indicated that they saw ISO9002 purely as a selling tool. While it had helped them to improve some processes, on balance it was so bureaucratic that they would consider dropping it if it were not for a number of customers who demanded that they have it.

Most reports alluded to the use of quality management and assurance to implement differentiation strategies i.e. those not anchored on price competition. The Dutch sectoral report notes that high quality of service is of particular importance to that country as wage costs are relatively high. Overall, providing a quality service is one way of dealing with increased internationalisation and competition within the road transport sector. The ISO 9002 certificate is used to "signal" a commitment to high quality service.

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In some countries, noticeably Greece, the road transport sector is relatively very underdeveloped. The sectoral report therefore concentrates on efforts to re-organise the industry. The question of de-skilling and introduction of new skills is the focus of the report rather than the introduction of the quality theme. So many of the transport operators are small one-person companies and the road network is so poor that restructuring of the entire industry is more of an aim than quality. As a consequence the Greek sectoral and case study reports do not discuss in any great detail the issue of quality.

In addition, the presence of a high percentage of foreign workers in the workforce can create problems within the individual firms (as in Luxembourg where foreigners account for more than 52% of the workforce). This problem is particularly relevant when training programmes are being developed as language and cultural barriers exist.

Certain methods of improving overall quality were identified, i.e via:

- introduction of stricter control on access to the profession;
- implementation of real transparency of driving time duration, along with programmed reduction in driving times. The objective is to standardise driving conditions and reduce or eliminate those companies who provide unfair competition by infringing the regulations; and
- utilisation of initial and continuous training as a general rule (rather than the exception) and requiring a minimum qualification higher than merely a driving licence.

Case Example: Training and ISO

In the Netherlands, a special case study on the Common Employment Service for Road Transport (Gemeen Schappelijke Personeelsolienst voor het Wegvervoer - GPdW) illustrates that the GPdW has to provide drivers who are capable of working within ISO-companies. This has implications for the contents of training courses run by the GPdW - even though as an organisation itself, it does not have to achieve ISO certification.

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(ii) Increasing Customer Demands

The majority of sectoral reports point to increasing demands by customers of transport companies. Customers are demanding increasingly high levels of service and view ISO 9002 certification as a guarantee that a company can deliver the required standards of service. The overall value of goods being transported is also increasing which is leading to customers having higher expectations and in turn to transport companies having to invest in logistical systems such as warehouse management and just-in-time deliveries.

(iii) Emergence of New Technologies

Innovative technologies have been developed in recent years to improve the transport and distribution functions and these are now available at prices within the reach of many transport companies. EDI, satellite communications, computerisation, advanced radio equipment all serve to substantially improve administration, communication and management within companies - and, therefore, service quality. At the same time there is a recognition that staff must be trained to take advantage of these technologies so that the overall improvement in service quality is achieved. Technologies are also being utilised to improve transparency of costings, real time location of goods and to build supplier-customer relationship where the customer has key information at all times.

Case Example: Kühne & Nagel, Luxembourg

The case study on Kühne & Nagel in Luxembourg identified "increasing quality standards from customers" as the most important change driver in the road transport sector. Customers who have outsourced their transport function to Kühne & Nagel are anxious not to lose control of that function. They demand information and transparency; they expect just-in-time delivery and they closely monitor the cost effectiveness of the outsourced function. Kühne & Nagel adapt to these demands by training employees in customer relations, EDI and Satellite communications technology. Kühne & Nagel in Luxembourg is currently aiming to achieve ISO9002 with a view to signalling their commitment to quality.

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(iv) Importance of Customer Care

Almost all rapporteurs mentioned the fact that customer care is an issue that is inextricable from quality management. The emphasis differed only slightly in the UK report where it is evident that customer care is almost as important an issue as quality itself and that dedicated customer care courses are well developed and common place in that country. Across the rest of Europe the focus is somewhat narrower. It is noted that the driver is increasingly having to play the role of the ambassador for the transport company. There is a realisation that, as some of the administrative and mechanic type functions are being simplified for the driver through technological innovation, he can now be utilised to present a corporate front or image for the company. Often training plans that are developed as a result of a focus on quality management will include a module on customer relations. One case study pointed to the driver being seen as 'the company's visiting card'.

Implications for CVT

ISO 9000 has a major implication for CVT programmes as it requires evidence of employee training needs assessment and annual training records. It has therefore compelled many companies to examine training needs more closely and to investigate cost-effective training methods.

In general, a focus on quality has pointed to the need for CVT programmes which include modules on customer care and high standards of customer service.

2.2.4 *Legal Requirements and Changes*

Legislation relating to the European road transport sector is discussed in detail in Section 3.1 of this report as well as in Sections 2.2.1 and 2.2.6 in relation to safety and protection of the environment. However, it is important to understand the effect of such legislation on the sector as it covers such areas as liberalisation and harmonisation of regulations, equipment standards, driving hours, environmental controls and training requirements.

One of the main effects of the legislation and its continued upgrading and changing has been to make transport companies look more closely at their organisations.

While legislation has forced some companies to upgrade where otherwise they might not have, it has also been utilised by some as a tool for gaining competitive advantage. It could be said that there are three types of companies in terms of reaction to legislation: the First-Movers, the Compliers and the Laggards (see Figure 2.10). The 'First-Movers' anticipate legal requirements and implement the necessary changes well in advance of deadlines or well in advance of competitors.

This is then used as a promotional tool to show customers that the company is always at the leading edge of change in the industry. First-Mover companies also understand that having to adapt to legal requirements at the last minute, or even after deadlines have passed, can be a costly business. Compliers are also interested in keeping up with developments in the industry and are anxious to avoid any possible fines and also to avoid annoying customers by not operating within legal requirements. They are not too eager, however, to spend money until they are absolutely obliged to and as such Compliers tend to meet legal obligations as they arise rather than anticipating them.

Figure 2.10

Pre-Legislation and Deadline	**Legislation Deadline**	**Post-Legislation and Deadline**
First Movers	**Compliers**	**Laggards**
Aim to:	**Undertake to:**	**Risk:**
⇒ exceed customers expectations	⇒ be prepared	⇒ **fines and [illegible] compliance**
⇒ gain competitive advantage	⇒ meet customers expectations	⇒ **adverse impact on customers**
⇒ Minimise possible disruptive effect of legislation when it arrives	⇒ avoid fines and lawsuits	⇒ **accident/injury and lawsuits**
⇒ protect the company and its customers	⇒ protect the company and its customers	⇒ company reputation and market share

The focus on legislation and regulations at EC level has led to more discussion on safety and service quality. The requirement for companies to train employees who deal with the transport of dangerous substances has meant that many companies have engaged in formal training of their employees for the first time. In general the response to the effect of this training has been positive although many small companies in this survey did complain that the industry is too competitive for them to be releasing busy employees for several days training.

Legal requirements and regulations also aim to reduce the number of unauthorised operators in the road transport sector. In the past the sector has had its fair share of "cowboy" operators who have operated unsafe vehicles with low-pay employees and marathon driving times. Changes to the regulations and enforcement of same will help to address this situation. However, as enforcement and compliance rules are controlled on a national basis some countries still feel that they are at a major disadvantage if they have better compliance procedures than others. For example, the German sectoral report points out that in Germany there were 20,000 inspections carried out in relation to driving and resting hours in 1993 - while in the Netherlands there were just 72.

Implications for CVT

Legal requirements can directly affect the CVT programmes of road transport companies. The most obvious example of this is the EC Directive relating to the training of drivers in the transport of hazardous goods.

Legislation for training can force companies to undertake a minimum level of training and is therefore useful in acting as a catalyst for training where none existed. Changes in legislation also force companies to keep their employees informed so that compliance can be assured. However, as long as compliance is not enforced in certain countries, legislation training modules may not be included in all CVT courses.

2.2.5 Flexibility and Customer Demands

Flexible service and the ability to adapt to customer needs and demands is becoming all important to those companies seeking to gain competitive advantage in the road transport sector. Customers are becoming increasingly demanding and more sophisticated - particularly manufacturing customers who have converted to just-in-time systems. Many road transport companies are therefore competing on the basis of providing a higher level of 'customised service'.

One method of organising to meet customer needs is the design of an appropriate integrated logistical system for each customer segment, requiring that the transport company analyse the needs of its major existing and potential customers and then design its organisations and capabilities accordingly to meet the requirements. Another method is the selection of a small niche market upon which the company can focus. A highly personalised service can then be provided which may not need a sophisticated logistical and communications system backup. The challenge to growing and large, multi-national transport companies is to provide both a highly personalised service *and* sophisticated logistics systems. Employees therefore have to be familiar with corporate strategy and positioning, with the latest technology capabilities (e.g. EDI, IT) and with the company's logistics systems. This would apply also to the staff of sub-contracted companies which are often used to improve the flexibility and service of large companies.

One of the advantages of satisfying customer demands and remaining flexible to their changing situations is that a relationship can develop between the two entities. The transport operator can then become more efficient in the supply of the service and the customer is confident of a reliable service.

The most important reason for changing haulier is service failure, followed by levels of cost[1]. This underlines the importance of all hauliers having a customer focus to their operations. A customer oriented company will therefore need be aware of the trends in manufacturing towards shipment of goods on a JIT basis and toward the reduction of order cycle times.

Implications for CVT

Like the focus on quality issues, flexibility and customer demands are leading to the development of CVT courses in customer care. Training staff in the principles and techniques of Just-in-Time processes is also helping companies to achieve flexibility and meet customer demands.

As demands of customers within different industry segments become more differentiated and change more rapidly, ensuing competitive pressures will be a strong motive for a higher volume and quality of CVT in the most successful road transport firms.

2.2.6 Environmental Issues

One of the issues within the road freight transport sector which almost all of the national sectoral studies identified as being important for the future is that of "green" or environmental issues. There is a growing level of public opinion and debate on the topic of environmental protection. A larger number of entities are now involved in lobbying for legislation to protect the environment From a road freight transport viewpoint the main environmental concerns appear to be transit traffic, pollution, fuel and equipment efficiency and the use of alternative transport modes.

This section reviews four major areas of environmental concerns in relation to road transport: transit traffic, pollution, fuel efficiency and alternative transport modes. The controls and laws which have been put in place to address the issues are then discussed.

Major Environmental Concerns

Major Environmental Concerns

Transit Traffic

Pollution:
  - fuel emissions
  - noise levels
  - traffic congestion

Fuel Efficiency

Alternative Transport Modes

(i) Transit Traffic

Some countries are particularly concerned that environmental legislation should be harmonised as deregulation is leading to an increase in transit traffic across their road networks and national taxes are having to pay for the extra costs which are incurred through damage to roads and the environment.

Switzerland and Austria are two countries which have well-developed systems to deal with transit traffic. These include bans on lorries over certain weights and the use of ecopoints to limit the amount of nitrogen oxides to be emitted by heavy goods vehicles. Bilateral agreements have been established between the EFTA countries and the European Community and these reflect acceptable ceilings on the expansion of road transport from the Community. The development of heavy goods transport routes via the Löschberg, Gotthard and Brenner passes is particularly important in this respect.[4] However, a concerned Austria calculated at one stage that, of all emissions by freight traffic on the Brenner Pass, transit traffic accounted for about 45% of carbon monoxide emissions, 72% of hydrocarbons, 28% of nitrous oxides, 28% of sulphur dioxide and 77% of particulates.

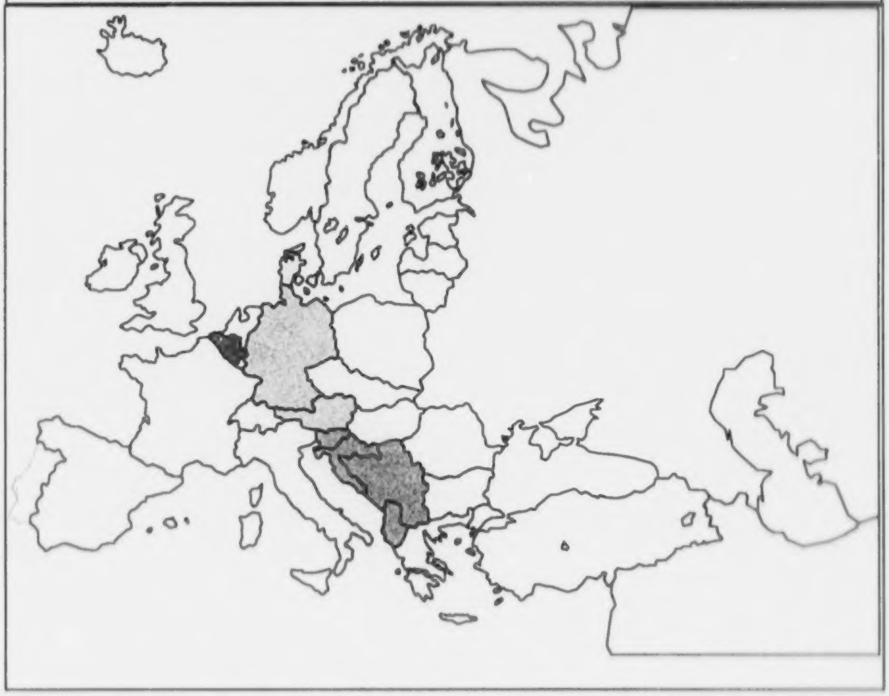
The two countries also utilise road taxes to internalise some of the environmental costs which result both from road traffic in general and from transit traffic in particular. Austria for example applies tolls on transit routes. Switzerland has a limit on tonnage which has redirected much of the potential transit traffic to other routes - mainly to Austria. Investments are also planned to make the railways more attractive - particularly for bi-modal traffic.

Other countries which are becoming more aware of the problem and are now beginning to take steps to control it are the former Yugoslavia, Denmark, Belgium and Germany, all of which act as gateways to several other

European countries. The position of these transit countries is highlighted in the map below (Fig. 2.11). Germany, in particular, is becoming increasingly concerned about transit traffic since the opening up of the Eastern European markets. The country has the highest road taxes in Europe (apart from the UK) and is keen to see harmonisation of road tolls/taxes/charges so that it will not have to bear the costs which result from this considerable increase in transit traffic.

Figure 2.11

Map of Europe Highlighting The Position of the 'Transit' States



(ii) Pollution:

Fuel Emissions

Road traffic is responsible for a large part of total air pollutants. Among the major air pollutants are the following emissions which result from the burning of vehicle fuel:

Sulphur Dioxide (SO_2)
Lead (Pb)
Nitrogen Oxides (NO_2)
Particulates (aerosols)
Carbon Dioxide (CO_2)
Carbon Monoxide (CO)

Both gasoline-driven and diesel vehicles emit carbon monoxide, hydrocarbons, nitrogen oxides and carbon dioxide, though diesel vehicles emit CO and NO_x at lower rates. Furthermore gasoline vehicles emit lead and diesel vehicles emit SO_2 and particulates.

The Green Paper on Transport and the Environment was adopted by the European Commission in early 1992. This paper noted that road transport is responsible for 79.7% of total CO_2 output of transport in the EU. While the majority of this is accounted for by private cars (55.4%) a significant amount is attributable to goods vehicles i.e. 22.7%.

As well as air pollution, fuel emissions also have an indirect effect on water and soil quality, which can be particularly serious in the case of accidents involving dangerous substances.

Noise Levels

Noise pollution is also a major environmental concern in many countries. For example, from December 1989 Austria introduced a ban on lorry movements at night except for low noise vehicles and those carrying perishable foodstuffs, livestock and certain other commodities. In Switzerland there is also a ban on night time goods vehicle traffic *and* on Sunday traffic.

The EC Green Paper on The Impact of Transport on the Environment (20 Feb 1992) stated that overall noise level of road traffic can be broken down into engine noise, rolling noise (from tyres on the road) and other intermittent noise. Under normal traffic conditions the presence of lorries significantly increases average levels of both noise and the number and intensity of noise peaks. Psycho-sociological studies have shown that the noise of a single lorry is equivalent to that of six passenger cars in terms of perceived annoyance. On roads with intermittent traffic the equivalence can be as high as 10 to 15 cars for one lorry[1]. The degree of urbanisation, the population density and the structure and density of the road network are all important elements which influence the annoyance level.

A recent report on the contribution of road transport to environmental problems in the Netherlands (VROM 1991/Andriannse 1993) showed that it was the main cause of noise nuisance in that country - causing over 80% of all noise pollution.

In Luxembourg there is a limit of 94 dB on noise emissions from vehicles weighing less than 3,500 kg and 89 dB for those weighing over 3,500 kg. The sectoral report also remarks that while training courses are being amended to incorporate concerns in relation to improvement in safety records, they are not being amended to address environmental concerns.

Traffic Congestion

Traffic congestion results in reduction of mobility, increase of energy consumption and operational pollution and inefficient use of time. It can also cause a loss of comfort and personal well-being, a drop in income, production or leisure. Traffic congestion and its socio-economic impacts has been the subject of several studies around the EU. Available data on the social and economic cost of road congestion indicate a cost of £10 to £15 billion per year in Great Britain and of 1 billion guilders in the Netherlands.[2]

As discussed already under the issue of road safety, traffic levels are forecast to increase significantly. On the major European routes, given a favourable economic climate, road transport is likely to almost double over the next 20 years for both passengers and goods. In addition, international traffic should increase rapidly because of the decline in frontier effects.

Another factor influencing traffic congestions is the decrease in direct employment in production and the increase in white collar services employment. This means that traffic flows on some arteries will increase because the services employees will commute chiefly using their own cars. In addition, in contrast to employees in production related activities, they often move around during the day and are therefore less likely to use public transport.

The control of traffic congestion is therefore becoming more and more important and various methods are currently being utilised. These include encouragement of the use of alternative modes of transport, improvement of inter-modal links, charging for the use of the network and provision of new infrastructures such as the Trans-European Networks discussed in Section 2.4.2.

(iii) Fuel Efficiency

The report Europe's Environment; The Dobris Assessment (Ed. Stanners and Bordeau Feb 1995) highlighted significant concerns in relation to energy consumption by the road transport sector, as follows:

"In the EU road transport currently accounts for over 80% of oil consumption of the transport sector. Thus the demand for oil products by transport is largely responsible for the depletion of non-renewable resources, energy related emissions and environmental impacts arising from the oil industry.

Energy consumption by transport doubled in the EU between 1970 and 1990. In Central Europe the increase was far more modest, though the consumption of petroleum for road transport increased by nearly 50% in the same period.

Trends indicate that, in a 'business as usual' scenario, energy consumption and hence transport related CO2 emissions will increase by almost 25% between 1990 and 2000 (CEC 1992a). The main increase in consumption of energy and CO2 emissions will be for road transport. Growth trends may even be greater in Central and Eastern Europe."

Such concerns will clearly be influencing the movement to constantly improve fuel efficiency and these would obviously be supported by cost-sensitive companies who will be in favour of increasing fuel efficiency levels.

(iv) Alternative Transport Modes

Concern for the environment, fuel efficiency and congestion issues are forcing many governments to reconsider their transport investments. The alternatives to road transport are now regularly evaluated.

Many Governments now utilise multi-criterion analysis for decision-making on transport investments (see inset on the Dutch criteria). Environmental protection can be an important criterion in this regard and is leading to increases in expenditure on alternative, more environmentally friendly, transport modes.

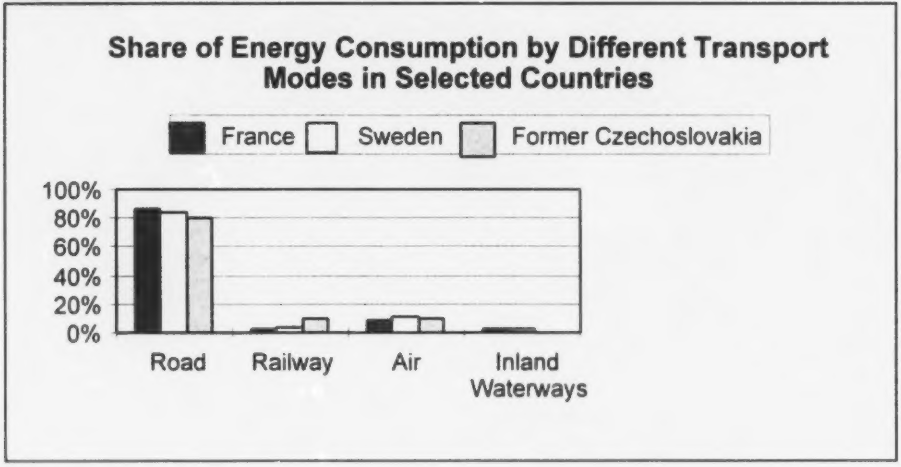
Multi-Criteria Analysis Utilised In The Netherlands For Assessing Transport Investment Projects[3]

Five broad criterion categories are considered and each is weighted (out of 100) to reflect its importance to decision-makers:

Economic activity	35
Human environment (noise/air pollution)	25
Road Safety	20
Transit role (importance for freight)	15
Physical planning (impact on land use)	5

Rail is the most obvious alternative to road and there is an increasing view that it could grow by functioning as a "piggyback" mode, i.e. one which is used in conjunction with road rather than instead of it (also known as "bi-modal transport"). The main reasons behind the increased investments by Governments in rail infrastructure are that it provides a more environmentally friendly form of transport and that it can help to relieve congestion on the roads. Figure below indicates the attractiveness of rail transport in terms of energy consumption.

Figure 2.12



Governments' attitudes to alternative transport modes are evident from their investments. The Irish sectoral report, for example, indicates that the Irish Government is planning significant expenditure on building new roads and upgrading existing roads - but it is also investing in rail. Similarly in

Germany the development of combined transport terminals is seen as a way of trying to encourage a shift of freight traffic away from road to rail - For the first time in Germany, there will be more new investment in rail than in road.

However, while many Governments are investing to encourage shifts in the usage of transport modes in order to protect the environment, they also acknowledge that road traffic is still set to grow significantly in line with the economy and that investments to improve the road infrastructure are therefore a necessity. The emphasis for German national transport policy remains on maintaining accessibility but in a more environmentally sustainable way[3].

All Governments will have to consider the advantages of road over rail to the commercial freight transport companies - i.e. that it offers fast, flexible and reliable door-to-door delivery capabilities and therefore enables Just-in-Time deliveries as discussed above under Flexibility and Customer Demands. A statistical and discursive analysis of transport mode shares and trends is set out in Section 2.1.2.

EU and National Controls For Environmental Protection

EC laws have been designed in order to manage many of these environmental concerns and individual countries in turn have been testing various laws and charging systems.

Figure 2.13 describes how the UK has employed a Motor Transports Environment Award to encourage attention to environmental protection. A range of measures used across Europe to control the environmental impact of transport is also presented in Figure 2.14.

Many of these controls are still being tested for their effectiveness and countries and the European Commission are still investigating new and better ways of protecting the environment from the adverse effects of transport.

Figure 2.13

Case Example: Environmental Concern

In the UK there is a Motor Transports Environment award and one of the case study companies, Lane Group Plc, has won this award twice. The Lane Group has stated that it is committed to the highest level of environmental performance and to minimising the environmental impact of its operations. The company recognises that effective management of business resources is closely associated with considerate use of natural resources. Therefore, it has a policy which monitors its progress and measures its actions in relation to the following areas of business:

Natural Resources
Waste Management
Environmental Audit
Communication & Education
Training
Research and Development

[1] Delsey, J., (INRETS), Nuisances from Heavy Goods Vehicles, ECMT, Paris, January 1991 p.2

[2] EC GREEN PAPER on The Impact of Transport on the Environment, 20 Feb 1992

[3] Missing links: Settling national transport policies, A CBI discussion document 1995

[4] Trans-European Networks: Towards A Master Plan For The Road Network and Road Traffic

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Figure 2.14

Measures To Control The Environmental Impact Of Road Transport

Technical Measures:
Emission standards on CO, VOCs, NOx and particulates for all kinds of motor vehicles (e.g. by the EC and UNECE);
Fuel quality standards concerning for example lead, sulphur, benzene (e.g. by the EC);
Noise standards for motor vehicles (by the EC);
Development of electric cars and fuel cells.

Construction Measures:
Noise protection walls along major roads and motorways, low-noise asphalt;
Bridges and tunnels for animal crossings;
Integration of infrastructure into landscape (e.g. via environmental impact assessment).

Transport Planning and Traffic Management:
Provision and improvement of public transport facilities;
Provision of separate cycling tracks;
Restriction of car use in inner cities and residential areas via parking restrictions,
Pedestrian zones, speed limitations, road safety measures;
Extension of rail, waterway and combined transport;
Bans on through traffic.

Economic Instruments:
Internalisation of external costs for all transport modes through taxes and fees (e.g. energy tax, fuel tax, road pricing and parking fees):
Differentiated purchase taxes e.g. between leaded and unleaded petrol
Scrappage benefits to encourage owners to replace older polluting vehicles with cleaner vehicles fitted with catalytic converters.

Others:
Regular in-service test for motor vehicles;
Time restriction on transport movements, especially bans on night and weekend driving for trucks;
Lowering and enforcement of speed limits;
Encouraging smoother driving behaviour;
Educational campaigns;
Car pooling;
Staggered working hours; encouraging working from home;
Carrying through existing resolutions (e.g. ECMT resolutions on Transport and Environment (no 66) and Power and Speed (No 91/5) and conventions (e.g. UNECE Sofia protocol on NOx emissions, 1988).

Source: D Stanners & D Bordeau, Europe's Environment - The Dobris Assessment Feb 1995

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Implications for CVT

In countries where there is a tradition of environmental protection policies, it is likely that CVT will increasingly reflect these concerns. Increasing traffic congestion may lead to greater need for driver tuition on how to handle stress. Changes to transport infrastructure (road or rail) may also impact on logistics training for route planners. If companies identify ways of improving the environmental side effects of their operations they may also have to train staff in these new processes.

2.3 EMERGING BUSINESS STRATEGIES

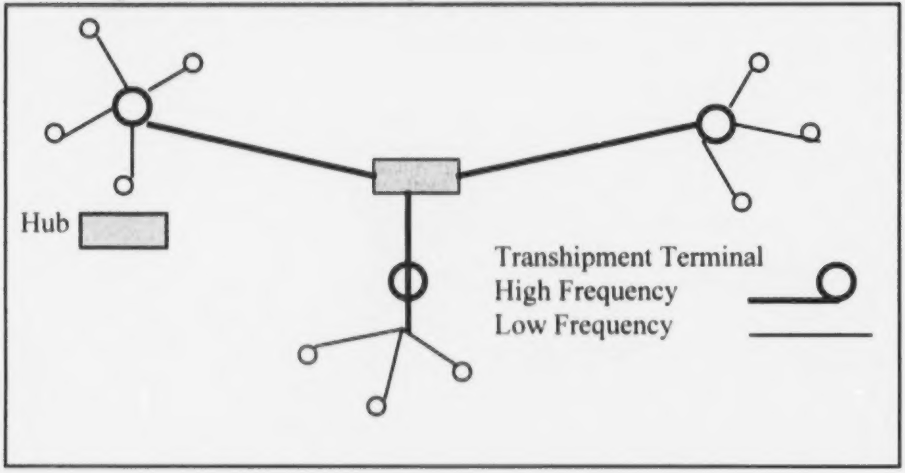
Road transport companies are adopting business strategies which are geared to deal with the forces which are driving change in their industry. These forces have been discussed in section 2.3 under the headings of Safety Issues, Technology Developments, Quality Issues, Legislation, Flexibility and Customer Demands and Environmental Issues. This section initially discusses forces external to the road transport industry which may have an impact on the type of business strategies that freight transport companies adopt. It then analyses the main type of business strategies which have been emerging over the last few years.

External Forces

Outside of the road transport sector, moves towards a Single European Market have encouraged manufacturers and retailers to expand into international markets. Many organisations have developed “global” strategies which enable them to integrate production, distribution, sales and other business functions on a cost-effective basis over a much increased market area. Popular corporate strategies are resulting in highly efficient production systems with little or no work-in-progress stock and delivery to the customer on a just-in-time (JIT) basis. This has led to the development of sophisticated warehousing and delivery systems. JIT demands have resulted in an increased number of delivery runs and, because of expansion into new geographical markets, greater control on route planning and timing is also required.

With such demands being placed on the logistical systems of expanding manufacturing companies who to date have been transporting on own-account, the advantages of outsourcing the logistical process are becoming clearer. This is evidenced by the trend towards concentration in the road freight transport business sector as illustrated in Section 2.4.3 The Role of Multinationals and Small Companies. A small number of Hire & Reward road transport operators are developing sophisticated logistical systems in order to serve their high volume, highly demanding, multinational manufacturing clients. The Report of the Committee of Enquiry on Road Freight Transport in the Single European Market (July 1994) presented a Hub and Spoke network diagram (Figure 2.15) which illustrates the requirements in logistical terms:

Figure 2.15: The Hub & Spoke Network



The Committee's report indicates that "as a consequence, the demand for road transport has increased with the large, professional hauliers being preferred. In turn, these enterprises are modifying their own operations to carry out different parts of the service. Traditional point-to-point and multi-step operations continue to comprise, however, a significant share of the important local markets".

Generic Business Strategies

Analysis of the sectoral reports and case studies, together with other relevant published reports, makes it possible to summarise the general business strategies which prevail in the road freight transport sector as follows:

Generic Business Strategies in Road Freight Transport	
Low-Cost	**Specialisation**
High Quality	**Integrated Logistics**

(i) **Low-Cost:** Operating on a low-cost strategy is relatively easy as barriers to entry into the road freight sector are low. In addition, liberalisation of regulations within the Single European Market and the opening up of Eastern Europe have both led to a significant increase in competition and to low-cost strategies being a popular option.

Low cost operators tend to have unsophisticated delivery systems, low tech vehicles and basic office technology. However, low cost competition will be pushed into an ever smaller share of the road transport sector as excellent client service becomes a qualifying criteria for competing in the road transport sector.

Few of the case studies in this Force project covered companies which were following low cost strategies. It would appear from an analysis of the range of cases that low-cost is associated with low safety levels and poor quality. The Italian sectoral report, for example, indicates that the road transport sector there is suffering internationally because the numerous small operators cannot compete with foreign firms who have invested in quality, safety and technology. Similarly, the Greek Small Company Workshop illustrated that most companies feel that the future of the sector lies in the provision of more complex transport services.

It is likely that, as the sector becomes more developed, low cost strategies will be operated by medium and large size companies who already provide everything the customer wants in terms of quality, safety, technology, logistics etc. At the moment these companies are investing time and significant amounts of money installing the necessary hardware and software and customers are willing to pay for it. However, as the sector gets more competitive the element of price may become more important for these companies. Some companies have pointed out that by developing a very close relationship with their customer they can distance themselves from price competition. Overall, it would appear that the dual forces of higher customer service and lower cost are working together.

Case Example: Italy

The Italian sectoral report highlighted the fact that small, one-man operators dominate the sector (approximately 90% of companies). In summarising its description of the road transport companies in Italy it stated:

"The typical Italian road transport firm is therefore striving to achieve a competitive position, by tightly controlling costs; by over-utilising vehicles; by relying on unskilled personnel and by minimising both vehicle maintenance and their depreciation.

This situation leads firms to develop strategic lines centred on prices: critical success factors are to be found in low costs."

(ii) **Specialisation:** As a result of increased competition transport operators are looking for ways of differentiating themselves. One strategy being used is that of specialising by product segment or geographical area. In effect, they are engaging in market segmentation targeting different segments of end-users who have different transportation needs.

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Typical product specialisations include transport of refrigerated goods, dangerous goods or high-value (low-volume) items. These companies usually invest in high-tech equipment and skilled personnel - with obvious implications resulting for CVT.

Examples of specialised market niches which are presented in the Force case study reports include transport of refrigerated goods, antiques and art collections and hazardous materials.

Case Examples: Specialisation Strategies

The Transports Frigorifiques Europeens (TFE) company based in France is a leader on the European market for controlled temperature transport for hire & reward. It is divided into two main divisions: the cold and frozen products logistics division and the fish and seafood logistics division. The range of products transported by TFE has been extended from perishable goods to include goods which require transport or storage at temperatures ranging from -18° to +4°. These include food products, pharmaceuticals, and photographic or computer technology products.

Training is organised on mainly two levels: Familiarisation Training for new recruits teaches them the techniques of cold storage and transport and Ongoing Training is provided in relation to the handling of cold products and general operations, communications and management techniques.

Another case study, Adams Transport Co A/S, describes the largest furniture remover and storage company in Denmark. Besides private and company removals Adams have specialised in moving high value goods such as antiquities and art collections for exhibitions. In addition, the company is storing different kinds of data such as lawyers' files and medical scientific records. Adams' storage facilities are approved by the Royal National Library to store temperature and humidity sensitive items.

In practice training is playing a great role in developing a skilled workforce. Adams has developed its own 'packing master' course in which employees are trained to pack boxes and trucks in an efficient and secure way and to manage a total removal job. Participants are also trained to customise packings for high value, transport and handling sensitive goods.

(iii) **Quality:** If a company does not wish to invest in specialisation and yet does not want to compete in the high-risk, low-margin arena of the low-cost strategy, it will be attracted to differentiation on the basis of service quality. Such an operator aims for relatively high standards in customer relations, achievement of deadlines, safety, transparency of the delivery process, hygiene, corporate image, etc. all of which have implications for the training of staff.

Section 2.2 Forces of Change illustrates that quality of service is increasingly considered by customers as a key part of the transport operation for which they are paying. Companies following 'quality' strategies therefore actively promote their high service standards and certification achievements.

(iv) **Integrated Logistics and Transport:** This strategy is adopted by large road transport operators who are serving multinational customers. The strategy requires investment in customer relations, EDI, warehousing, sophisticated communications systems, large capacity vehicles and various vehicle types. A high level of personnel skills are required for management and operation of IT systems, logistics and staff/customer communications. Often these companies have sub-contracts with local transport operators - many of whom will be operating under the strategies mentioned above.

Case Example: Kühne & Nagel (Germany)

A German case study on the well known Kühne & Nagel company provides a good example of a multinational integrated logistics and transport company. The German sectoral report has identified a shift in the structure of transported goods i.e. from bulk transport to small freight unit transport and this would indicate a greater role for logistics management. The Kühne & Nagel report states:

"As early as 1987/88, the extension of the logistic field and the utilisation of EDP as a resource of productivity was elevated to the rank of a strategic aim in Kühne & Nagel's corporate policy.... In Europe, this strategy aims to intensify the existing Euro-logistic network into a Europe-wide infrastructure which will enable customers to send their product to any customer with the help of a network controlled by Kühne & Nagel ... In addition, new data-processing systems will enable customers to call up information on logistic flows on the screen world-wide... This integration of customers into Kühne & Nagel's world-wide information system became possible by the transnational co-operation with the American group General Electric which, with its global cable and satellite transmission network, offers the basis of this service..."

Case Example: Roland Munch (Denmark)

Roland Munch has developed over the years into a supplier of several kinds of national and international goods transport. It has also developed a business concept to include warehousing and the development of major Danish manufacturing companies' transport and logistics concepts. The company has recently been bought by one of the biggest transport companies DFDS and will therefore soon be one of the biggest hauliers in Europe.

Among the customers of Roland Munch are both national and multinational companies such as Carlsberg, Dadeko, Ford, Gilette Denmark and IBM. The arrangement with Ford is for the distribution of spare parts. The principle is that Danish Ford dealers can place their order at Ford in Cologne before 4.00 p.m. and get delivery before 10.00 a.m. the next day. Roland Munch operates two tightly scheduled freight journeys every night from Cologne to Horsens in Mid-Jutland, from where the spare parts are re-distributed to Danish dealers.

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Business Strategies and Strategic Groupings

It is possible to group road transport companies on the basis of the business strategies that they are following. It is also possible to the typical company characteristics within each strategic grouping. Figure 2.16 presents a summary of typical company profiles for each type of business strategy using four company characteristics: the size of the company, its technological capability, the geographical area being served and the market being targeted.

Figure 2.16 Typical Company Profiles per Each Business Strategy

	Size	**Technological Capabilities**	**Geographical Area**	**Market**
Low-Cost	small	lo-tech	focused area	niche
Hi-Quality	small *or* large	hi-tech *or* lo-tech	wide *or* focused	niche *or* broad
Specialisations	small *or* large	hi-tech	wide *or* focused	niche
Integrated logistics	large	hi-tech	wide area	broad

Company Profiles: Size

In general, companies following simple 'Low-Cost' strategies tend to be relatively small while those companies following 'Integrated Logistics and Transport' strategies tend to be large, international organisations. This latter point is true because the companies cover large geographical areas which require efficient data management and communications back-up and because they can afford to spread the cost of expensive IT and communications equipment over a large number of customers. Any growing company would at some stage have to invest in technology which allows them to operate an efficient logistical system.

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The size of companies following 'Quality' strategies varies: both small and large companies offering a broad range of transport services will often use quality as a selling tool. Similarly, for 'Specialisation' strategies there is no typical size. Examples of companies, within this Force project, which specialise in the type of goods they transport include COMAP (employs eight people and operates in the area of oil refuelling), Transportes Amaral & Frias, Lda (employs 119 people and transports fuels, chemicals and LPG) and DHL (a parcel courier service offering a 24 hour delivery anywhere in the world and has 9,500 vehicles worldwide).

It has been noted that some transporters are adopting a strategy of dropping additional services such as warehousing - so as to be able to provide a high quality service by sticking to their core competence which is road haulage. It appears that such strategies are favoured by small companies who want to concentrate on a niche market.

Company Profiles: Technological Capabilities

Advanced technological capabilities can be an important factor for a company wishing to gain competitive advantage. This is particularly true for transport companies who have adopted either Specialisation or Integrated Logistics and Transport strategies. A company specialising in fresh or frozen foods transport needs appropriate refrigeration and food handling equipment while integrated logistics needs computer technology and possibly satellite tracking facilities.

In contrast, low-cost strategy companies would be reluctant to invest in expensive hi-tech equipment unless it resulted in financial savings. The companies that have been profiled in this FORCE survey do not appear to have utilised hi-tech equipment as a method of saving money. Generally low-cost strategies have been equated with single service offerings and often with low quality transport.

Company Profiles: Geographical Area

The broadest geographical coverage of any area tends to be undertaken by companies providing integrated logistics and transport services. Using their advanced equipment these companies can track goods over very wide areas and can transport freight at high speed using the optimum mix of transport times and modes. Road transport companies following either hi-quality or specialisation strategies may or may not cover wide areas or stick to more focused geographical target markets. However, the companies who follow Low Cost strategies are tending to cover only small, focused target areas as this is the cheapest option for them. Covering a large area for economies of scale would be a possibility but it usually ends up that such a company needs to be providing added value services as well, such as logistics, satellite tracking and/or warehousing.

Company Profiles: Market Segmentation

Companies who tend to serve niche market segments include those following Low-Cost, Hi-Quality or Specialisation strategies. The Hi-Quality strategy does not necessarily restrict itself to niche markets as the quality theme can be adopted by both large and small, hi-tech or lo-tech, wide or focused market areas and similarly, niche or broad market segments. In contrast to this, Specialisation strategies actually depend on a tight focus on the chosen niche market. However, Low Cost strategy companies tend to serve niche segments simply by default, i.e. they restrict themselves from offering a hi-tech, all round service. They focus on a particular segment of the market which does not necessarily want integrated logistics, or special transport facilities or even proof of a quality transport system.

The one strategy which usually means that a broad range of market segments has to be targeted is the Integrated Logistics and Transport strategy. This strategy requires that the company actually plays on the fact that they can deal with complicated transport problems, a range of customers and different types of freight.

Implications for CVT

The strategies which companies are adopting have implications for CVT programmes in road transport companies.

Some of the smaller companies following low-cost strategies are reluctant to spend time or money on training systems. As they use simple processes the need for CVT is reduced anyway. CVT courses for these type of companies typically require a focus on efficient systems, the control of waste and the improvement of safety records. The influence of quality standards and customer demands (as discussed in Section 2.2 Forces of Change) may also lead to quality being included as a topic on the CVT agenda.

CVT programmes for companies following the other three generic strategies require the input of experts in fields such as: ISO 9000, special product areas (frozen foods, fresh fruit, valuable antiques, etc), logistics, communications systems and vehicle systems. For this reason the technology manufacturer such as Mercedes-Benz or IBM will sometimes become involved in training employees of the transport company.

Alternatively, transport company employees are trained as trainers so that they can tailor the course to needs and availability of the rest of the company. They can also keep updating the course as technology and business processes develop. Having an internal trainer helps to maintain a focus on the training needs of the staff. Many companies also find that training a trainer is more cost-effective if a lot of employees have to be trained.

The other option is for the company to send employees to an external training centre which has the required expertise to hand.

Case Example: Transportes Amaral & Frias - (Portugal)

Transportes Amaral & Frias, or TAF, presents an interesting training programme which includes contributions from customers and equipment suppliers. The company is beginning to follow a strategy of total quality management (TQM) and is starting to develop training plans which fit in with this new strategic objective. The case study states: "Having reached its maturity phase, the challenge for the Company now is to overcome the logic of family-type management in an increasingly competitive market which makes considerable demands in terms of quality. This indeed, is the centrepiece of the company's present and future strategy: to work towards "Total Quality" ..."

Training actually began in the company on the initiative of customers. One of their key customers is the Shell oil company which insists on training procedures being undertaken. Shell administers the training courses at its own premises and has therefore had a key role in helping TAF to adopt its TQM strategy.

Suppliers of equipment also provide TAF drivers with training. In this way TAF can ensure that they are operating the equipment in the optimum (and safest) way. Their goal of providing a top quality service is therefore more attainable.

More recently, vocational training has come to be viewed as a management instrument. As such strategies are being developed in order to upgrade its existing status in accordance with a vision of the company's future in which the aim is "Total Quality". The following topics have therefore been defined as priority areas for future training encompassing all of the company's employees:

- quality of service
- marketing/sales
- defensive driving
- behavioural area
- hygiene and safety

When employees are being taught complicated procedures it helps if they understand the business strategy and corporate thinking of the company. Accordingly, some CVT courses may include modules on these topics as well as teaching the actual procedures. Many of the companies studied in this Force project spoke of using an open style of management to disseminate corporate thinking.

Case Example: COMAP (France)

COMAP is a maritime company specialised in oil refuelling. Its in-company training system aims at gearing training to corporate culture and seeks to promote employees motivation by associating them to the corporate strategy "while removing the sacred aura surrounding the hierarchy". A result of the training has been a noticeable change in the frame of mind of the drivers which in turn makes for higher service standards, easier staff integration and greater motivation.

Some employees will find that the new procedures will mean a significant change in their approach to work. For example, those who were used to filling out paper forms and generating weekly and monthly reports may be asked to work instead with real-time data on software packages and to communicate with drivers via satellite systems. The concept of JIT requires employees to be familiar with the technologies which enable such a service to be provided. The human resources divisions of the transport companies will therefore need to pay close attention to the development of suitable CVT programmes.

Companies following the 'Integrated Logistics' strategy will have a higher number of non-driver employees attending their CVT programmes. This is because there is a significant impact on the administration side of the operation and drivers do not need to know the detailed mechanics of the logistics systems.

Drivers will, however, represent an important target for CVT courses in areas such as safety, customer care, preventive driving techniques, remote data input, vehicle maintenance and goods handling.

Case Example: Transportes Frigorifiques Europeens (France)

Transportes Frigorifiques Europeens (TFE) specialises in controlled temperature transport. Continuing training themes are diversified so that they suit each category of personnel. The case study report details the breakdown of subject matters per job category and some the differences are highlighted as follows:

Topic \Target Group	Executives	Office Workers	Drivers
I.S (office equipment)	36.1%	25.1%	2%
Safety	-	0.4%	0.6%
Cold industry	-	-	81.7%

Note: % relates to the % of overall training for that particular group. Only selected subjects are shown.

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2.4 FACTORS INFLUENCING THE DEVELOPMENT OF THE SECTOR

2.4.1 *International Competition and the Impact of the Single Market*

The construction of the common transport market and the role of the Community

Article 3 of the Treaty of Rome provides for the creation of a common policy in the transport sector across the Member States, in accordance with the provisions of the Treaty. However, differences in interpretation of the Treaty between Member States led to the need for clarification of Article 74 by the European Court of Justice. This clarification led to the statement that the objectives to be pursued in the creation of a common transport policy are those generally applicable under the Treaty of Rome, i.e. the creation of a common market and the promotion of socio-economic cohesion.

The ambiguities that arose from the original Treaty articles concerning the transport sector retarded the creation and implementation of a common transport policy. Only in 1973 did the European Court of Justice provide clarification of the objectives to be met in the domain of transport policy. The lack of clear direction in the common transport policy combined with the economic crisis suffered by the Member States in the mid-1970s, led the Commission to limit its activities in this field to the harmonisation of national legislation, in place of establishing a true common transport market.

However, as from the publication of the Commission's White Paper in 1985 efforts to create a true common transport policy and market intensified. Liberalisation of transport services was seen a key tenet for the creation of the Single Market and was earmarked as a priority policy area by the Commission. In the wake of the publication of the White Paper on the creation of the Single Market, steps were taken to establish a European transport market free of quantitative restrictions, with the Member States agreeing to the total abolition of all bilateral quotas by 1993 and in the progressive implementation of cabotage within Community goods transport. Successively, quantitative restrictions were supplanted by qualitative controls on transport activity between the Member States.

Despite the progress made following 1985, many market distortions and inefficiencies continued to mark intra-community road transport markets, slowing the progress towards true economic integration. Conscious of this situation, the Commission increased efforts to reinforce the integration of the road transport sector at the Community level, specifically through support to the development of transport infrastructures across Community borders.

The European Union Treaty, signed in 1992, brought a new philosophy and spur to the development of a common transport policy across the Member States. The

Community's objective moved away from a focus on national transport infrastructures in general towards the development of trans-European transport networks and the removal of all restrictions or distortions in the Single Market's transport sector, i.e. state aids, administrative and legislative issues, etc. For the first time, the safety aspects and regional development contribution (Article 130 of the Maastricht Treaty) that the trans-European networks and transport activities became explicitly focuses of the common transport policy.

In the development of the Commission's fifth action program on the environment, the importance of linking the Community's environmental policy with sectoral polices, and in particular the common transport policy - were focused upon.

Currently the principal objectives of the Community transport policy can be summarised in terms of the creation and promotion of **sustainable mobility** within the Single Market. The emphasis of the common transport policy is now clearly on improving the level of competition within the Single Market for transport services and can be resumed as follows:

- creation of an ever more open Community market for transport services;
- securing open and fair competition, increasing the competitiveness of Community transport companies as well as improving their financial performance;
- increasing the operational efficiency of Community transport companies with concern for critical issues such as security, safety, improved working conditions and environmental questions;
- reinforcement of socio-economic cohesion through the contribution to regional development brought by trans-European transport networks, the reduction of disparities between regions and the development of transport services between insular and peripheral regions; and
- development of relations with countries outside the European Economic area in the transport area, where the transport of goods and persons between these countries and the Community is significant.

After a slow beginning the implementation of a solid legislative framework for the creation of a free market for the transport of good is now in place, with companies able to freely provide transport services independent of nationality or place of establishment. This legislative framework is both of a direct nature, e.g. driver working rules, and indirect such as in the area of insurance, safety, etc.

Although the basic legislative framework for the common transport policy is now in place, Community legislative activity in the road transport sector will continue. Specifically, the provisions of the creation of the Single Market allow for monitoring of the impact and continued applicability of the base legislative framework. For example, with technological advances, new legislation will be required in the area of standards harmonisation, e.g. in the emissions area as well as the updating of legislation in other areas such as maximum driving times, etc.

The creation of the common transport policy is not only driven by new legislation but also the Community's competition policy. The Commission is particularly concerned that without strict application of Community competition law, the creation of the Single Market in the transport sector may become distorted by the concentration of economic power with organisations that have grown both generically and through acquisition as the transport sector restructures.

Increased Competition in the Community Road Transport sector

The increase in competition within the Community road transport sector is not only impacted by the Community's common transport policy. There are many other areas of Community policy and legislation that at both the Community level and the Member State level have a significant impact on the structure and situation of the road transport sector within the European Union.

The vast majority of the legislative and policy framework put in place to support the creation of a true Single European Market for the free movement of goods and persons has an impact - in one form or another - on the road transport sector, namely on the increase of the market. This was the case, for example, with the adoption of the Single Administrative Document and the abolition of other administrative processes at frontier crossings. These developments have had significant impacts on the operations of road transport companies operating at the international level, in term of the skills needs of drivers and administrative staff, as well as in terms of efficiencies and time gains in the execution of road transport services across Community frontiers.

Other areas of Community policy that have had significant impacts on the competitiveness and operations of Community road transport companies are, for example, the Community's Regional Development Policy that has had a considerable impact on road transport infrastructures, especially in the Objective 1 regions. Other policy areas such as Social Policy and Environmental Policy have also had impacts on the structure and nature of the road transport sector.

Taking into consideration the panorama of Community legislation and policy that has evolved over the last decade, there are those areas that have had a direct and significant impact upon the structure of the Community's road transport sector and those that have had a more indirect impact. The first group of policies and actions covers the development of the common transport policy - as described above - the construction of the Single Market and the ensuing legislation on harmonisation of standards in the fields of freedom of establishment, social, technical, environmental and other areas, as well as the Community's social policy where it is directly focused on the activities of the road transport sector. The second group covers activities where transport is not a prime focus of the policy but in some way or another plays a significant role in the development of the Community's objectives in each field, such as regional development, competition and environmental policy.

Within each of these groups of policies and activities there are specific measures that have a greater or lesser direct and significant impact on the structure and workings of the Community's road transport sector. For example, legislation aimed directly at the . deregulation of the sector, harmonisation of technical standards, mutual recognition of professional qualifications, the abolition of fiscal and administrative barriers to trade between Member States. At the other end of the impact scale are those policies that condition the level and form of general economic activity within the Community and hence shape the structure and operation of the road transport sector as well, such as the Community's economic and monetary policy, tax harmonisation, etc.

The impacts of Community policy, legislation and actions are so varied and impact so many areas of operation of road transport companies and the structure of the sector that it is not feasible to describe specific cause - effect relationships between individual policies or legislation and the impact on the road transport sector. It is also true that different policies and measures have different levels of impact on the structure and operation of road transport activities in different Member States depending on the state of development and competitiveness of the sector at the national level. It should also be remembered that in addition to the impact of Community policy and legislation the road transport sector is forced to adapt to changing economic , competitive, social and technological conditions.

At the global level, it is obvious that the increased deregulation of the road transport market and particularly the freedom of establishment, the mutual recognition of professional qualifications and the drive to establish a true Single Market will all lead towards increased competitive pressures across the Community's road transport sector and that certain deregulation of fiscal and administrative barriers will reduce the cost of providing cross-frontier transport services. It would, however, be an over-simplification to try to describe more detailed levels of change within the road transport sector by isolating individual legislative and policy initiatives.

In analysing the global impacts of the development of the common transport policy and the legislative framework that directly or indirectly impacts the road transport sector, it is clear that the impact varies top some degree at the national level. For example, the level of sector restructuring and concentration provoked by the deregulation of the road transport sector is felt more directly in markets such as Greece, Portugal and Spain whose transport sectors have not been open to the forces of international competition rather than in the Benelux or other Northern European markets where competitive forces have already led to a significant degree of restructuring.

It is clear from the national sectoral reports that road transport companies within the European Single Market see the increased level of competition at both the national and international level as being the most important consequence of the policy and legislative impacts of the creation of the Single Market and that this increase in competitive pressures is felt throughout all of the Member States.

In general, increased competitive pressures have resulted in a greater level of recognition of the need for increased levels of quality in the provision of road transport services, in response to the changing profile of demand and the increasingly rigorous price/value demands made by clients. The response to increased competitive pressure through recourse to new technologies, especially information technologies is particularly notable in certain countries, namely Ireland, the United Kingdom, Holland and France. As a rule increased competitiveness has been secured through tighter cost control at all levels, through increased productivity of operational and support staff, as well as through the absolute reduction of overhead and fixed costs.

The structure of the Community's road transport sector has also been impacted by general market forces and increased competitiveness in other economic sectors. For example, increased competition in the manufacturing sector has led to substantial increases in the volume of road transport carried out by hire and reward firms. As companies refocus their activities on core businesses and core competencies, there has been a significant shift towards outsourcing of activities and services to third parties. The transport of goods, particularly, has been an area where increased competitive pressure has led early on to manufacturing companies disposing or "spinning-off" their owner operated road transport fleets and contracting out of all logistical and transport services to gain cost and operating efficiencies.

At the structural level, another clear trend in the Community road transport sector has been the concentration of economic activity. Especially in countries such as Spain and Portugal that have experienced a strong increase in competitive pressures over a relatively short space of time, increased competitive pressures has forced the realignment of many road transport companies to ensure survival. Although the structure of the sector in these countries continues to be highly fragmented there has been a significant increase in industrial concentration as the weaker companies fail or are acquired by more successful companies.

One further factor worthy of note in terms of the changing structure of the road transport sector is the increasing level of internationalisation of ownership, with international companies rapidly gaining footholds within the national road transport sectors of various Member States, for example Portugal. Especially in the Southern European Member States the internationalisation of the road transport sector has invariably meant the entry of Northern European operators rather than the internationalisation of Southern European operators - although there are some notable exceptions to this rule.

These countries along with certain other Objective 1 countries/regions, such as certain areas of Italy, have benefited to a greater extent from actions carried out in the ambit of the Community' Regional Development Policy, where the emphasis has been on the improvement of road transport infrastructures both at the inter-regional and cross-frontier level. Typically, the improvement of the road transport infrastructures in Objective 1 countries/regions has also led to significant substitution effect between transport sectors, with rail transport companies losing market share of the total goods and persons transport market to road transport.

Although the impact of the Single Market has had a strong impact on the nature and structure of the road transport sectors of almost all Member States, Greece stands out as a market in which the deregulation of the transport sector has had less of an impact than has been the case in other markets, due primarily to the country's geographical location. Competition in the national marketplace has, however, increased substantially and the Greek road transport sector is following the trend in other countries towards increased concentration of ownership of road transport companies.

2.4.2 Infrastructure & Traffic Planning

One of the most significant factors affecting the service quality and productivity levels of the road transport sector is the actual road network or infrastructure, in terms of its scope, quality, usage levels, support facilities, etc. The development of infrastructure is increasingly seen as requiring an integrated approach - with infrastructure planning and management, transport policy and regulation and logistical considerations all complementing each other in efforts to improve road transport efficiency.

Traditionally, countries have evaluated infrastructural investments on the basis of national benefits and costs. The effect of investment in the road transport sector on other countries was not considered. However, the emerging "global" market and increasing levels of international transport have helped to change the narrow national focus. It has consequently been accepted by the Member States of the Single European Market that a strategic approach to the development of road infrastructure on a European basis is more sensible.

In October 1993 a Trans-European Road Network (TERN) was adopted as the official road network of the Union. The strategic objectives and plans for achieving the TERN are:

Development of an Interconnected Network - incorporating the building of circa 120 "missing" motorway links of over 12,000 kms of which two fifths are in peripheral countries. The deadline for this is 2010.

Achieving Inter-operability of the Network - involving the standardisation of inter-urban road topology such as geometric standards, user service levels, signs and marking.

Management of the Traffic Network - through development of telematic systems, modal interchanges and road pricing related to congestion.

The map presented afeter Figure 2.17 illustrates the Trans European Road Network (TERN) outline plan, showing existing road networks, planned road networks and also "priority corridors in Eastern Europe".

The Committee of Enquiry into Road Freight Transport in the Single European Market (July 1994) welcomed the development of the TERN and further recommended:

- the full use and development of Information Technology (IT) in order to achieve the best possible use of capacity, including aspects of safety such as the monitoring of hazardous goods, weather and road conditions; and

- the provision of adequate service facilities , particularly on strategic corridors, relating to information transmission, transhipment, inter-modal exchanges, payment of user road charges, vehicle maintenance and checks, secure parking, storage and drivers rest facilities.

The issue of infrastructure was not one which was specifically included in the Methodological Memorandum for the writing of sectoral or case study reports. Despite this, it was highlighted as an important issue in a number of national sectoral reports i.e. Greece, Italy, UK and Denmark. The common theme running through these reports is that the rapid increase in traffic levels over the last five to ten years has not always been accompanied by an appropriate expansion in road networks. For example, the Italian report states that traffic levels have increased by circa 30% over the last ten years in that country, while the increase in the motorway road network was only 6.75% or 388 kilometres versus 2.979 kms in Germany and 2.302 kms in France. Meanwhile in the UK, a backlog of motorway reconstruction has built up which has led to congested motorways while the Government tries to clear the backlog. Many countries also have problems with utilisation of motorway networks as certain sections of road can carry traffic volumes that significantly exceed the average.

The last Europa Transport Annual Report of 1989 analysed the length of motorways in the twelve European Member States and across EFTA, using the best available data. The results showed that:

- 53% of European motorways are in Denmark, France or Italy, although these countries only have 32% of the population;

- the greatest density of motorways (km/1000 km^2) occur in Belgium and The Netherlands where the density is 31/2 times the Community average and seven times the European average;
- the greatest density of motorways (in terms of km per mio population) occur in Czechoslovakia, Luxembourg and Austria where the density is twice the Community average and three times the European average;
- growth of length of motorways has been about 2% per annum in the Community since 1980 and has slowed to 2 to 3% p.a. in EFTA and the rest of Europe

The Greek sectoral report makes an interesting point in relation to the financing of infrastructural investment costs mainly by third parties which are usually the public sector - as opposed to their being financed by private companies. The implications of this are summarised as follows:

- The share of road as a competitive transport mode is increased e.g. versus rail or air
- The barriers to entry into the road transport sector are lowered as investment cost is restricted to vehicles and transport know-how
- Productivity of operators in the road transport sector is partially dependent on road infrastructure and traffic conditions which are controlled by others.

The Importance of the Trans-European Network and National Transport Policies

One of the major strengths of the TERN is that it is being considered within the overall Trans-European Network (TEN) which has a multi-modal focus. It is therefore set against the strengths and weaknesses of each mode and does not ignore the existing networks of each mode and the links between them. As such there are Trans-European plans for land, sea and air transport modes and for combined transport. As an illustration of the multi-modal approach, Volume 38 C97 of the Official Journal of the European Communities (20 April 1995) lists five projects or groups of projects which have been devised to deal with the implementation of new technologies and which relate to traffic management to improve the use of infrastructures. These projects are identified as pilot actions which should lead in the course of the next five years to full implementation and have been estimated to cost around 50 billion ECU in total:

- air traffic management: harmonisation and integration of the national air traffic management systems into a unified system,

- road traffic management services: pilot actions using traffic control centres and radio data system - traffic message channel

- vessel traffic management and information services: a European ship reporting system,

- system of reporting and navigation: development and implementation of European components of the global navigation satellite system (GNSS),

- pilot projects for a railway management system: control command systems for selected high-speed rail links.

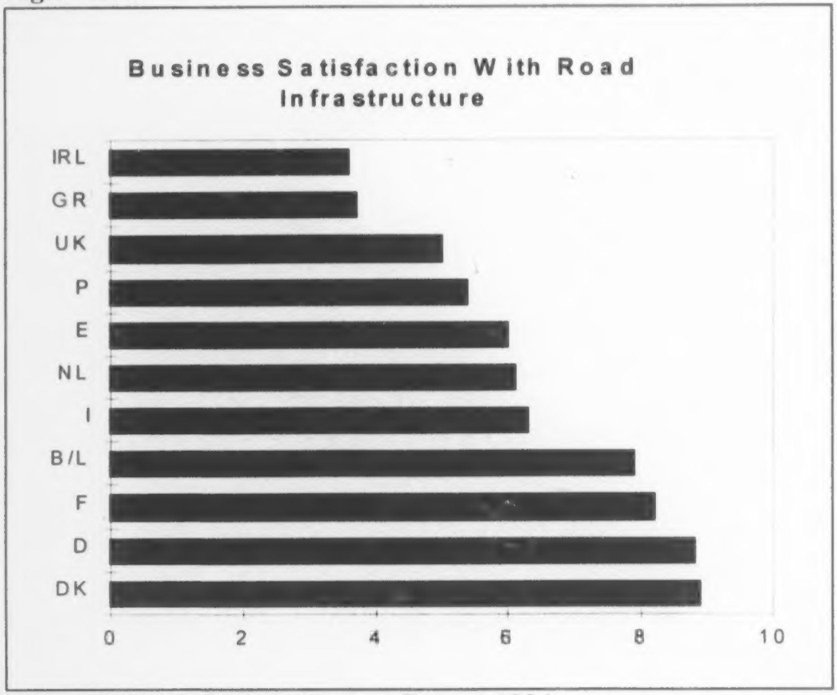
The obvious advantages of developing strategic transport policy via a multi-modal approach are discussed in the Confederation of British Industry's discussion document on "Missing links: Settling national transport priorities (1995)". It states that policy in Germany compares favourably to that of the UK as the former "seeks to emphasise the complementary rather than competitive relationship of different forms of transport". The report states that "the difference of approach between Germany and the Netherlands on the one hand, and France and the UK on the other, in balancing economic with environmental objectives is underpinned by a greater willingness in the first two countries to see and develop transport networks as an integrated whole".

The development of European and national road infrastructures are therefore very much controlled by principles and policies adopted by Government at both levels.

They are also strongly influenced by the existing and planned infrastructure of alternative and complementary transport mode networks.

Figure 2.17 below provides an interesting view of the satisfaction of business people with the road infrastructure in their country. This is a subjective analysis of business people who have ranked the extent to which road infrastructure meets their business requirements (10 = highest level of satisfaction).

Figure 2.17



Source: World Competitiveness Report 1994

Sources:
- *Europa Transport 1989 Annual Report*
- *Road Freight Transport in the Single European Market - Committee of Enquiry Report & Recommendations July 1994*
- *Missing links: Settling national transport priorities, CBI discussion document Jan 1995*

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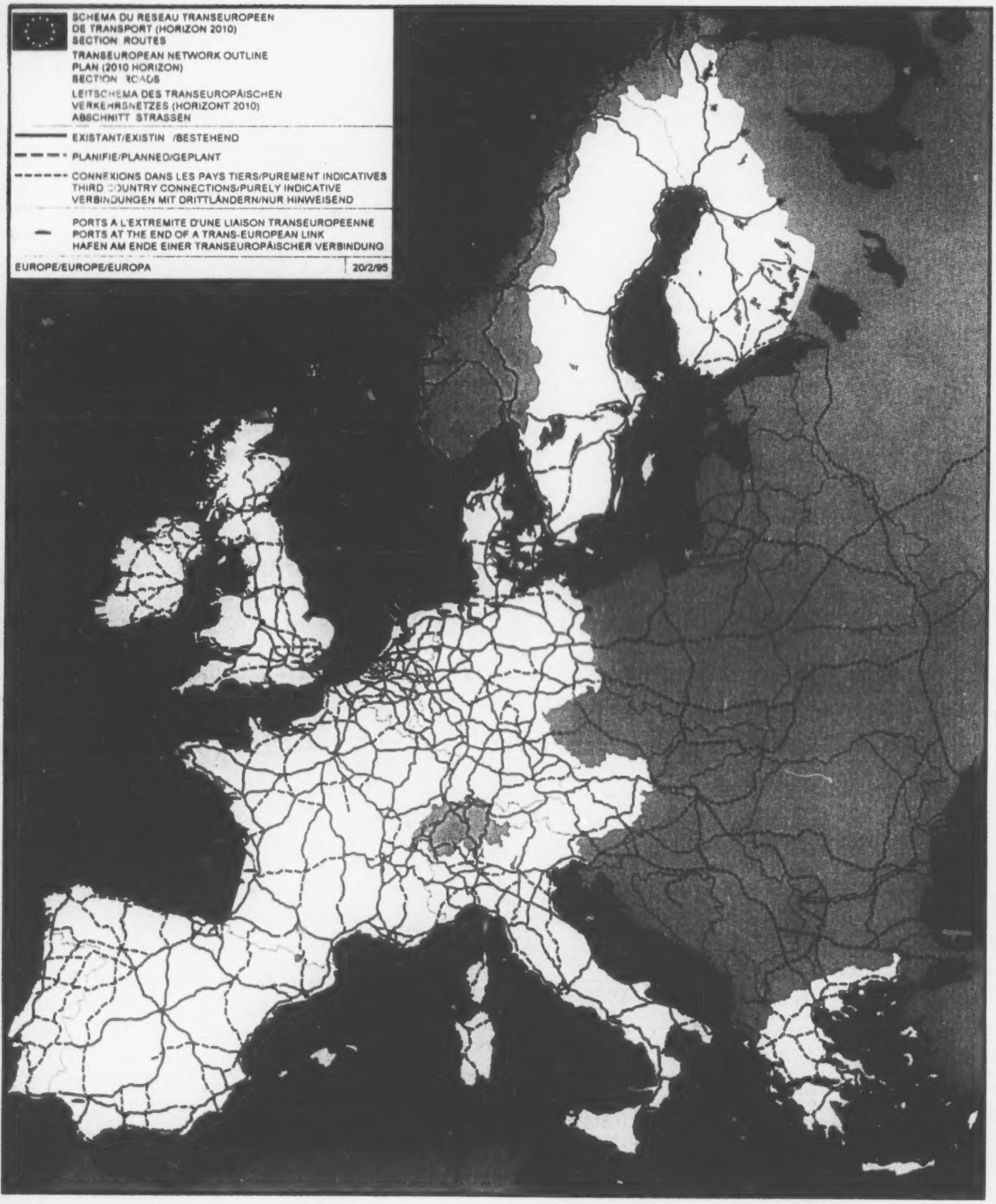
SCHEMA DU RESEAU TRANSEUROPEEN
DE TRANSPORT (HORIZON 2010)
SECTION: ROUTES
TRANSEUROPEAN NETWORK OUTLINE
PLAN (2010 HORIZON)
SECTION: ROADS
LEITSCHEMA DES TRANSEUROPÄISCHEN
VERKEHRSNETZES (HORIZONT 2010)
ABSCHNITT STRASSEN
EXISTANT/EXISTIN /BESTEHEND
PLANIFIE/PLANNED/GEPLANT
CONNEXIONS DANS LES PAYS TIERS/PUREMENT INDICATIVES
THIRD COUNTRY CONNECTIONS/PURELY INDICATIVE
VERBINDUNGEN MIT DRITTLÄNDERN/NUR HINWEISEND
PORTS A L'EXTREMITE D'UNE LIAISON TRANSEUROPEENNE
PORTS AT THE END OF A TRANS-EUROPEAN LINK
HAFEN AM ENDE EINER TRANSEUROPÄISCHER VERBINDUNG
EUROPE/EUROPE/EUROPA
20/2/95

WORKING DOCUMENT

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2.4.3 The Role of Multinationals and Small Companies

The road transport sector across Europe is dominated by a large number of small companies. These companies have for years operated on low cost and basic transport services and many of them are still doing so. However, there is now a new type of company, the multinational, which is having a profound effect on the nature of the entire sector. The multinational has a network of operations around Europe and is providing high quality logistics, warehousing, stock management and just-in-time deliveries. Many of them operate via high-level information technology, with highly skilled staff and on the basis of very high standards.

There has been a noticeable change in the competitive nature as a result of the success of the multinational firms. Such firms are increasing in size as the key to their success is large, flexible networks which allow them to be as efficient and effective as possible. They are focusing on market segments where they can specialise and on areas where they can gain market share through the provision of value added services.

Figure 2.18 below shows that the road haulage industry is dominated by small firms. In the southern Member States of Spain, Italy and Greece, 95% or more of small firms have less than six vehicles. However, in countries which have a large share of international road transport there tends to be fewer small firms.

Figure 2.18: Number of Road Haulage Firms and Size Distribution by Member State

Member State	No of Firms	1-5 Vehicles (%)	6-10 Vehicles (%)	> 10 Vehicles (%)
B	7812	73.5	10.9	15.4
D	44572	88.7	7.7	3.6
GR	26994	98.5	1.5	-
E	164976	98.4	1.4	0.2
F	28895	80.0	7.5	12.5
IRL		79.3	20.7	-
I	204119	95.0	3.1	1.8
NL	7390	70.6	15.9	13.5
UK	40000	85.5	7.8	6.7

Source: European Economy: Social Europe, Number 3, 1993/IRU

The European Economy report shows that that the average size of road haulage firms appears to be growing over time - at the cost of a decrease in the number of firms in the small size category. It is likely that the small firms are either being squeezed out of the market because their margins are so thin or they are being swallowed into the networks of the larger companies. The national reports highlight the fact that many growing companies are happy to sub-contract work to small companies as a cost-effective way of expanding their distribution networks. A close relationship is often developed with these sub-contractors so that quality and continuity of service can be assured

The Netherlands sectoral report highlighted the fact that the barriers to entry into the road haulage industry are almost non-existent. The result is that there will always be small, one-man companies setting up. This practice means that supply tends to be greater than demand and prices are always under pressure. As mentioned before, the larger companies often engage in sub-contracting for warehouse management and transport activities. This tends to occur both on an ad-hoc basis at peak times and through structured chartering of small transport companies who can help to expand or just operate a flexible network. For the future, the Netherlands expects to see increasing enlargement of the transport companies, together with further differentiation of customers' demands, sharper requirements of customer service, accelerated product innovations and particularly intensified competition.

In Denmark there has also been a noticeable level of concentration amongst hauliers. In that country green permits are granted to all professional hauliers with trucks exceeding 6 tons. Permission is also granted on the basis of economic solidity, information availability, burden of debt to public institutions and qualifications levels for the transport of goods. Between 1979 and 1993 the number of hauliers possessing green permits has decreased, while the number of permits issued has increased by about 6000 - thus indicating a higher degree of concentration amongst hauliers over that time.

By contrast, in Greece it has been noticed that the average size of road haulage firms is *not* growing over time. This has been put down to the lack of modernisation and poor funding of the sector. It had been pointed out that the official statistics in Greece are not really representative of the true picture. Current legislative requirements mean that truck owners for international operations have to establish special transport companies and each has to own at least 200tn gross in weight. While the law provides economic incentives for the establishment of large companies, in practice these "companies" are associations of individual truckers who never develop a common strategy.

Meanwhile in the UK it is evident that there has been the usual trend towards concentration. The sectoral report points out that the recessionary times lead many manufacturing and retail companies to outsource their transport, warehouse management and logistical activities so that they can stick to what they do best and allow the experts to management logistical and transport sides of their business. Of course these companies expect high standards of service as there will be a negative impact on their customers otherwise. They therefore keep a close eye on the transport company and in turn the issues of customer care and quality of service have grown in importance in these relatively large transport companies. In the UK it is noted that retailers in particular have followed this trend towards "contract distribution" but it is expected that this will spread across all industry sectors.

The French situation is similar in that there is a significant proportion of small companies operating in the sector - according to the national sectoral report three quarters of the French companies employ from 0 to 5 staff (in 1992 the total number of companies was 40, 364) . At the same time, there is a high degree of concentration as the approximately 728 companies who now employ over 50 staff are responsible for more than a third of the turnover and investments in the sector.

3 - EMPLOYMENT ENVIRONMENT OF THE ROAD TRANSPORT SECTOR

3.1 EC LEGISLATION

As was stated in Section 2.4.1 the creation of the Single Market in the transport sector has developed relatively slowly, not so much in legislative terms but in the organisation and operation of the Community transport sector. However, one of the areas in which the European Commission has been subject to greater pressure to advance legislation has been in the social area and specifically in the improvement of working conditions for workers in the transport sector.

With the entry into force of the Single European Act in 1988 the European Union's activities in the social area were given a new impetus, as a concrete basis has been created for dialogue between the social partners at the European level. As a result of the political commitment to the Single European Act the "Community Letter of the Fundamental Social Rights of Workers" was signed by all Member States, with the exception of the United Kingdom, in 1989.

Developments in the area of social rights in the transport sector have been secured through two complementary routes:

- on the one hand, those developments that are a consequence of advances in the Common Social Policy, through which several social policy initiatives have been applied in the transport sector with the support of the social partners through parity committees (Parity committee on Road Transport) and through the Economic and Social Committee; and

- on the other hand, developments that result from the realisation of the Single Market in the transport sector, given that the opening up of competition between Member States forced the need to approve certain standard norms in the social area in order to avoid distortion of competition between transport companies, i.e. in the area of maximum driving hours.

  The signing of the European Union Treaty in February 1992 and, following this, the signature of the Protocol on European Social Policy (by all Member States with the exception of the United Kingdom) reinforced the political will to develop EU policy in the social area. In this Protocol - that applies equally to the road transport sector - there are several key areas that have an impact on the employment environment in the road transport sector, namely;

  - consolidation of the Community Letter of the Fundamental Social Rights of Workers;

- the key role given to the social partners in the consultation process for the elaboration of legislation with social implications; and
- an expanded and improved professional training policy.

Community measures to protect and promote the interests of workers cover three basic areas, under which the key areas of direct interest to the road transport sector are:

(a) The Establishment of Social Dialogue and Collective Negotiations

In this area, one of the key actions has been the creation of the Parity committees. These committees represent a forum in which worker representatives and employer organisations can discuss issues between themselves and with the Commission. The focus of these discussions is the formulation of policies and legislation that impacts a given sector of activity as well as the issues arising from implementation of policy and legislation. The contribution of these committees is especially important as concerns questions related to the social area and specifically access to a given profession, to vocational training and the living and working conditions in a given sector of activity, as well as the protection and promotion of jobs.

In the road transport sector, Commission Decision 516/85 of November 18, and its subsequent alterations instituted the **Parity Committee for Road Transport.** This Parity Committee has had an important role in the development of the common transport policy, specifically as it applies to the road transport sector.

(b) Measures Relating to Access to Different Professions and Vocational Training

With a view to facilitating competition and to allow workers to benefit from the opportunities of working in different Member States, measures have been agreed that guarantee the mutual recognition of qualifications by the national authorities of the Member States. Additionally, minimum standards have been established to guarantee that persons/entities supplying transport services are sufficiently qualified to carry out this activity.

In the road transport sector, the following Council Directives represent the key legislation in this area:

Council Directive 561/74 of November 12 and its subsequent alterations relative to access to the profession of road transport of goods in the national and international domain.

Council Directive 562/74 of November 12 and its subsequent alterations relative to access to the profession of road transport of passengers in the national and international domain.

Council Directive 796/77 of December 12 and its subsequent alterations relative to the mutual recognition of diplomas, certificates and other titles in the road transport of goods and passengers. This legislation also includes measures destined to facilitate the freedom of establishment of transport companies throughout the Member States.

(c) Actions Related to Working Conditions

In this area, the Member States have approved various measures relating to working conditions in the road transport sector, namely in the areas of the minimum salary of drivers, maximum driving hours, compulsory breaks and minimum periods of rest. These and other areas of the working conditions in the road transport sector are embodied in the following legislation:

Council Regulation 3820/85 of December 20 and its subsequent alterations relative to the harmonisation of specific matters in the road transport dominion;

Council Regulation 3821/85 of December 20 and its subsequent alterations relative to the introduction of control equipment in the road transport sector.

Council Directive of November 23 and its subsequent alterations on the standardised proceedings for the control of the execution of Council Regulation 3820/85.

Commission Regulation 3314/90 of November 16 and Commission Regulation 3688/92 of December 21 that provide technical updates to Council Regulation 3821/85.

In general terms, the Member States have followed the guidelines set by the European Social Policy as applied to the road transport sector. However, it is important to underline that compliance with Community norms on working conditions in the road transport sector has not typically been rigorously implemented even in those Member States that have well developed controls in the road transport sector. The explanation of this fact has its roots in essentially two factors:

- on the one hand the liberalisation of the road transport markets and consequent increased competitive pressure on all operators - and especially the smaller operators - has increased pressure on operators and drivers to increase the hours worked and therefore not respect maximum driving hours and minimum rest/break periods; and

- on the other hand the complexity and difficulty of controlling operators experienced by the competent authorities, given the limited level of resources dedicated to this control and in certain cases the lack of technical competence of those directly responsible

3.2 EMPLOYMENT TRENDS

Introduction

It is difficult to measure the importance of the road transport sector in terms of its contribution to employment. This is because the data on employment is only partially available:

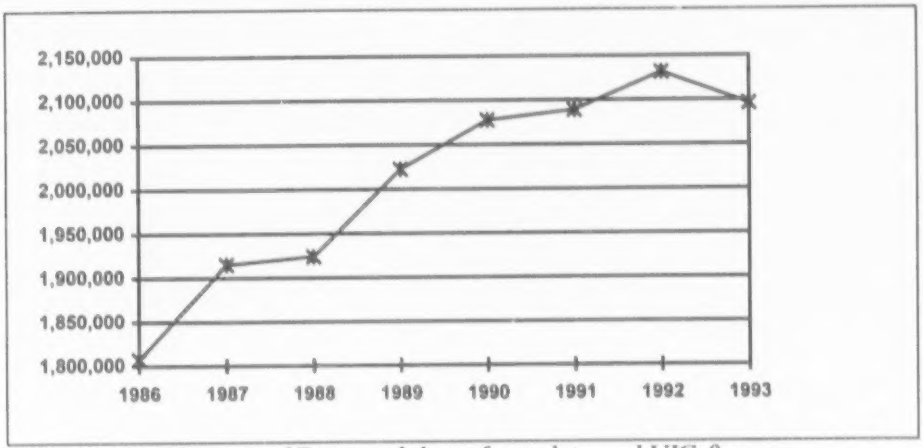
- The first data-source to look at is Eurostat. An important advantage of Eurostat-data is that they provide data in a standardised way: the same definitions are used for individual EU-countries. This makes it possible to compare data between countries. However, the labour force survey of Eurostat can only be disaggregated to the level of the Land Transport sector. This sector includes professional road transport (passenger and goods), railways and pipelines. Further disaggregation is possible by subtracting figures for the employment in railways (source: International Union of Railways, Paris). The remaining figures can then be used as an estimate for employment in the professional road transport sector, because employment in pipeline transport is very limited. Some of the graphs below are based on these figures. These figures are made on a uniform bases. A further disaggregation to attain figures for the professional road freight sector is only possible for some countries which have more detailed figures available.

- To assess total employment in own account transport is even more difficult. Own account transport cannot be identified in employment figures by sector, because own account transport is by definition spread over all kinds of sectors in the economy. The main activity of the companies concerned is not road transport. Another problem is to define the functions to be included in own account transport. The employees driving the vans or lorries may do other activities as well besides. Examples are carriers of circulating magazine folders, associates of agricultural companies conveying crops to the auction, drivers of company vans who move building tools, etc. For many of them the transport task is only their secondary activity. Only specific research in this direction can therefore bring detailed insight in the employment of own account road transport.

Total Professional Road Transport (Passengers and Goods)

Figure 3.1 illustrates that road transport is important for total employment in the EU. Nearly 2% of the total employment in the EU is in professional road transport (passengers and goods; Figure 3.2). This corresponds with a total employment of more than 2.5 million in 1993. The proportion of 2% can be seen as a minimum, because own account transport is not included. Moreover, when the proportion in man-years is taken, the proportion is higher, because working times are long and part-time work is limited.

Figure 3.1 Estimate for total employment in the professional road transport sector in the period 1986-1993



Source: Combination of Eurostat labour force data and UIC-figures

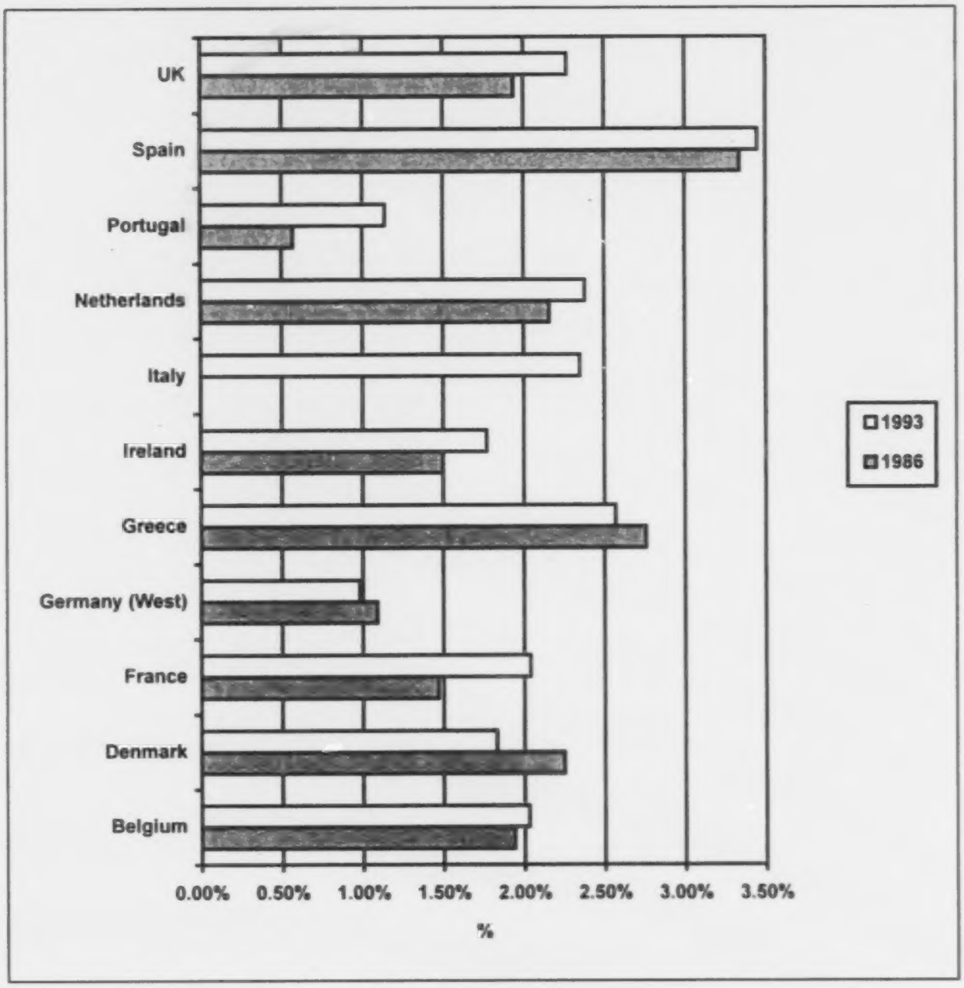
Note: Italy is excluded. If Italy could be included for 1993, total employment would rise to more than 2.5 million.

The proportion of the professional road transport in total employment differs per country (Figure 3.2). The proportion is higher in the southern European countries (Spain, Italy and Greece) and in the Netherlands. The proportion is relatively low for Germany and Portugal. Both countries traditionally have a relatively strong position of own account transport, which diminishes total employment in professional road transport.

Another illustration for the importance of the sector is the fact that the proportion of professional road transport in 10 EU countries has increased from 1.74% in 1986 to 1.92% in 1993. The professional road transport is quite special being a sector with many low-educated which has increased its share in total employment.

Growth is not spread evenly among the separate EC-countries. The growth of the employment proportion was high in France, the Netherlands, Ireland and the UK. A decrease of the employment proportion can be seen for (Western) Germany, Greece and Denmark.

Figure 3.2 The proportion of professional road transport in total employment in 1986 and 1993



Source: Combination of Eurostat labour force data and UIC-figures
NL: 1985 instead of 1986; EUR 1986: excluding Italy; B: 1992 instead of 1993.

Most of the growth in employment in the professional road transport has taken place before 1990. After 1990, total employment in the EU more or less stabilised, and between 1992 and 1993 even decreased (Figure 3.1). Road transport activities are sensitive to economic cycles. The slowdown in economic growth after 1990 is reflected in the employment figures. Moreover, because of productivity increases (see also section 3.4), employment growth is not as strong.

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Professional Road Haulage (Hire and Reward)

To gain further insight into the relative position of the professional road haulage and the road passenger sector, national sources have to be used. As far as they are available, they show that in most countries, the proportion of road haulage in total employment is larger (Figure 3.3). The exceptions are two southern European countries in which the employment in the road passenger sector is more important.

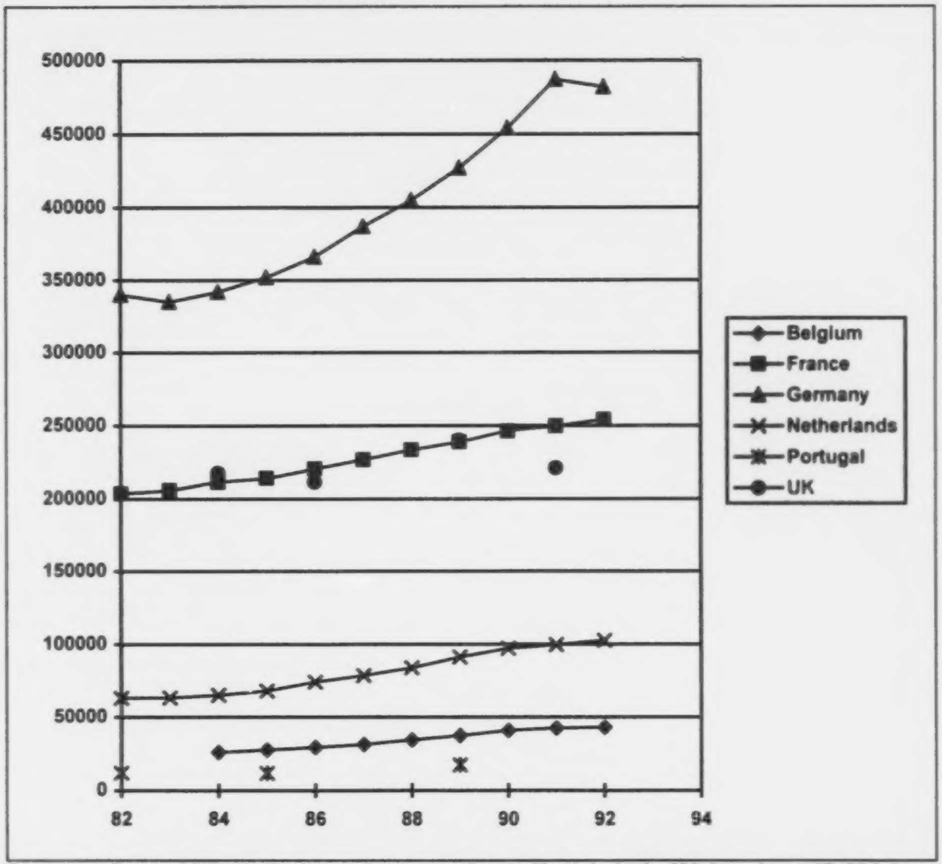
Table 3.3 The Relative Proportion In Total Employment Of The Professional Road Haulage Sector Within The Professional Road Transport Sector

Countries	*Proportion of professional road haulage*
Belgium	63% (1992)
France	56% (1992)
Great Britain	
Greece	35% (1985)
Luxembourg	73% (1993)
Netherlands	69% (1991)
Portugal	46% (1989)

Sources: France: OEST, UK: Employment Department (Census), The Netherlands: CBS, Luxembourg: STATEC, Portugal: MESS, Belgium: RSZ. For Portugal and Belgium, figures of employees instead of employment have been used.

The position of professional road haulage is also improving compared to passenger road transport. The growth of the professional road haulage sector was very strong in the second half of the 80's - growth patterns are illustrated in Figure 3.4.

Figure 3.4 The development in employment of professional road transport in several EU-countries



Sources: *France: OEST, UK: Employment Department (Census), The Netherlands: CBS, Luxembourg: STATEC, Portugal: MESS, Belgium: RSZ, Germany: Transport in Zahlen. For Portugal and Belgium, figures of employees instead of employment have been used. For Germany, the figures are an overestimation in comparison to the other countries, because a wider sectoral definition is used, in which for example freight forwarders are included.*

Note: Where Bars are omitted, data is not available.

Own Account

As already mentioned in the introduction of this section, it is very difficult to get figures for total employment in own account transport. In two national reports, an attempt is made to estimate employment in own account. In the Netherlands the attempt is based on a survey; in Greece the attempt is based on an estimation by the National Centre of Productivity.

Figure 3.5 Employment And Transport Flows Of Hire And Reward And Own Account In Greece And The Netherlands

	Total employment in road haulage:		*Total tonkm:*	
	Hire and Reward	***Own account***	***Hire and Reward***	***Own Account***
Greece (1985)	45,000	80,000	9,144	3,473
The Netherlands (1993/1992)	113,000 (of which 67% drivers)	113,000 (of which 52% drivers)	50,477	9,736

Note: International transport to non-EU countries is not taken into account.

When comparing productivity-differences between hire and reward (H&R) and own account (Figure 3.5) measured in tonkm per worker, it is striking that the figures lead to comparable relative differences in Greece (H&R:OA=4.7:1) and the Netherlands (H&R:OA=5.4:1). This information can be used to make a rough estimate of total employment in own account transport in the total EU. Total tonkilometers in Hire and Reward is nearly three times as high as in own account for the EU. Using the 5:1 productivity difference, this means that total employment in own account could be more than 1.5 times as high as employment in Hire and Reward. The employment in road freight transport (both H&R and OA) would in that case roughly be nearly 3% of total employment.

Although total employment in own account is very important and probably even higher than in hire & reward, it should be kept in mind that its share is decreasing. Moreover, it should be kept in mind that it is very difficult to determine exactly what is employment in own account. People in own account often have tasks in addition to their road transport responsibilities.

Concluding Remarks

The road transport sector employs a considerable amount of workers in the EU. Total employment in professional road transport is more than 2.5 million, which is nearly 2% of the total employment in the EU. If own account transport would also be included, total employment in the road freight sector increases to nearly 3%. This proportion for road freight transport is higher than, for example, the textiles and clothing sector or the automobile trade and repair sector.

Moreover, employment in the sector (especially in hire and reward) has increased fast since the second half of the 80's. This growth is expected to continue in the future.

3.3 RECRUITMENT PRACTICES AND EDUCATIONAL LEVEL OF ENTRANTS

In order to gain insight in the recruitment practices of road transport companies, we first must have an insight into the occupational structure of the sector. After all, the recruitment practices and educational level of entrants will depend strongly on the type of job they have to fulfil.

Occupational Division of Employment

Data about the occupational structure of the road freight transport sector are available in a limited number of countries. Some results are summarised in Figure 3.6.

Table 3.6 Occupational division of employment in professional road haulage transport in some EU-countries

Occupational category	FRA[a)	NL	UK	Port
Managers	5%	4%	16%[b)	9%[c)
Drivers	65%	67%	56%	53%
Warehouse staff	6%	8%	9%	2% ("storage area")
Technical staff (maintenance)	3%	3%		8% ("maintenance area")
Planners	21.1%	4%	3%	
Clerks		13%	12%	10% ("fin./adm. area")
Others			4%	18%
Total	100%	100%	100%	100%

(a) Total professional road sector (goods + passengers)

(b) Including owners, drivers, directors and partners. Some of these would be categorised in the other occupational groups in the other countries.

(c) Including "technicians".

It is important to note that within the sector, the borderlines between occupations are sometimes vague. Written descriptions of tasks are not common. A large part of the employment is concentrated in small companies in which there is a large invariability in the tasks conducted. The borderline between management and other occupations (like drivers) is for example vague, because the owner in smaller companies is also doing (part of) the driving work. This is probably the explanation for the large differences in the proportion of management in total employment. The UK-figures have a larger category for management than the other countries.

For positions other than management, the differences between occupational categories are in most cases limited. The driver is the most important category. Roughly 55-70% of the total employed are drivers. For warehouse staff, the proportion is limited in Portugal in comparison to the other countries. This is not surprising, because the proportion of warehouse staff is positively related to additional logistic services - like "warehousing" -

carried out by the road transport companies. These kind of services are more often found in the northern EU countries than in Portugal.

Other occupational groups are planners (3% to 4%), maintenance staff (3% in the Netherlands and France), and office personnel/clerks (roughly between 10 and 20%).

The division by occupation is much more unknown in own account transport. The preceding section already discusses how difficult it is to have a clear picture of the border of total own account employment. Only the Dutch national report gives an occupational division on the basis of a survey among own account companies. More than half of the occupations consist of drivers (53%). So this is the most important occupation, both in hire and reward, as well as in own account. The other important occupational group is warehouse staff (26%). The latter underlines the potential in employment for hire and reward companies if they are going to offer more and more these kind of services.

Recruitment and Educational Background

Although the educational background of the workforce is difficult to describe, because of national differences in educational systems, it is clear that the educational level of the workforce in the road transport sector is limited. Some figures from various countries could illustrate this:

- only 6% of managers in Portugal have a university degree
- 53% of the transport sector in Denmark consists of "unskilled", as compared to 41% in the total economy
- nearly 90% of the hire and reward drivers in the Netherlands only have primary education or lower secondary education, while this is only a third in the total economy.

In the past, the possession of a suitable driving license was the most important demanded skill for drivers. However, nowadays, as well as that, professional experience and individual qualities are becoming more and more important. Important individual qualities are things like flexibility, both in character as well as skills and a good presentation (the driver is the "ambassador of the company").

The importance of the educational background in recruitment for drivers seems to be limited. This has to be understood in the context of recruitment practices of companies. Particularly in the case of smaller companies, recruitment is informal: personal relationships and even family ties are very important. In the larger companies, more "objective" recruitment criteria, like educational attainment, are more important, with more "formal" ways of recruitment.

Educational background plays a more important role in larger companies and especially for the higher executives. For example, about half of the recruited people for executive functions in France are nowadays graduates of specialised transport education courses.

Recruitment by employing apprentices is not a common way of recruiting in the sector, because apprenticeship-systems are not very developed.

The differences in the importance of the educational background in recruitment can be illustrated by examples from two of the case studies (see box below).

Case Examples: Kuhne and Nagel, Transports Baonville

Kuhne and Nagel - Luxembourg and Germany are examples of large companies employing relatively large numbers of white collar occupations (eg commercial personnel) and small numbers of drivers. Quality is a leading issue and is seen as requiring good communicative skills of the workforce. Because of the increasing importance of good quality, there is a trend towards demanding higher initial education levels when recruiting personnel. One of the advantages of recruited personnel with higher level initial education is that their foreign language skills are usually more developed. In the past, speaking two languages was usually considered as sufficient. Nowadays, three languages is seen as a standard. At Kuhne & Nagel Germany 85% of the staff in charge of the handling of forwarding jobs have the professional title of a "Speditionskaufmann" or equivalent job experience; 10% of staff are semi-skilled workers and 5% of all employees in this division have a technical college or university degree. In internal administration, 85% of all employees have a professional title.

Transports Baonville in Belgium is an example of an informally operating smaller road transport company. The company has no precise recruiting policy. It has grown by taking on unemployed members of the family and those leaving school. The firm employs 7 drivers among which are the owners son, his brother and his nephew. His daughter handles the administrative work. Personal characteristics like trustworthiness, courage, psychological (coping with stress) and physical strength are seen as far more important than educational background. However, new demands seem to become more important, like a good presentation, the ability to deal with documents ("the red tape") and basic knowledge of foreign languages. The importance of educational background could increase in the future."

The fact that the educational level is often limited is also important in the context of CVT. If the initial background is limited, the need for CVT is expected to be greater. CVT is in that case sometimes needed to compensate the limited qualifications gained in the initial education systems (eg knowledge of foreign languages).

3.4 PRODUCTIVITY

Productivity is normally measured by dividing production by employment. For measuring production, there are two options:

(1) Measuring value added. It is important to measure value added in real and not nominal terms, so that value added figures for different years are comparable. Moreover, in order to make comparisons between countries, the value added figures have to be made uniform in terms of one currency. Especially the first point - constructing real and not nominal value added figures is difficult to cope with for this sector.

(2) Production could be expressed in tonkms (or tons). The advantage of this option is that figures are available (in contrast to the first option) and comparable. One disadvantage is that tonkms only in a limited way reflect developments like warehousing and other logistical "products". Moreover, the trend of the increasing value of transported goods lead to more "production" is also not reflected in the figures. Calculated productivity growth by this option could therefore lead to underestimations.

Because of the direct availability and comparability of figures for the second option, this is the one that has been selected.

Normally, employment figures should be corrected for part-time work in the measurement of productivity. However, in this sector, this is not necessary because only a small part of the working population in this sector consists of part-timers (section 3.6).

We restrict the analysis to those countries for which we have comparable figures for both tonkms as well as employment: Belgium, France, Greece, Luxembourg, Netherlands and the UK. Moreover, we restrict ourselves to Hire and Reward, because employment figures for own account transport can only incidentally be found. Section 3.2, using these figures for own account, leads to the tentative conclusion that productivity in own account is much lower compared to hire and reward[1]. The calculated tonkilometers per worker in Hire and Reward are presented in Figure 3.7.

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[1] This conclusion is not only tentative because employment figures for own account are only available for a few countries, but also because the available figures can only be seen as rough estimates. Possible explanations are the fact that own account transport makes less use of backloads, has shorter working weeks (less overtime) and makes more use of smaller trucks/vans

Figure 3.7 Calculated tonkilometers per worker in a selected number of EU countries in 1985, 1989 and 1991

	Tonkilometers per worker in thousands		
Country	1985	1989	1991
Belgium	313	387	390
France	276	357	396
Greece	203		
Luxembourg	239		315
Netherlands	409	414	427
United Kingdom	322	435	439

Note: Tonkilometers used (Eurostat) are exclusive tonkms of transport to and from countries outside the EU.

For the UK, 1985, employment figures of 1984 are used. Figures of 1984 and 1987 indicate that total employment remained quite stable in that period.

In 1991, tonkilometers per worker can be found in the range of 300 thousand to 450 thousand. Greece is the only country in southern Europe for which productivity figures are available (1985). For this year, Greece has the lowest productivity figures. Productivity seems to be highest in the Netherlands and the UK.

Translating these figures yearly growth figures leads to the following table:

Figure 3.8 Yearly Growth of Productivity

Country	***Yearly growth in productivity (tonkilometers per worker)***	
	1985-1989	***1989-1991***
Belgium	5.4%	0.3%
France	6.7%	5.3%
Luxembourg	4.7%	5.3%
Netherlands	0.3%	1.5%
United Kingdom	7.8%	0.4%

One of the most important conclusions is that for all countries and for both periods productivity continues to increases. In a country like France, this productivity increase has even been 5 to 6% per year. For some countries, the growth in the period 1985-1989 has been much larger than in the period 1989-1991, because total tonkilometers expanded more in the period 1985-1989. Part of the increase in tonkilometers in such a "booming" period will be achieved through even more use of overtime work. If the growth decreases, less use is made of overtime work.

Possible explanations for the increase in productivity are the increasing stage lengths of the journeys (more international transport) and the increasing loading grades of the trucks.

As already mentioned, the productivity increase is even underestimated, because new logistical services are only partially reflected in the productivity indicator. This could even more be true for a country like the Netherlands, for which the calculated productivity growth is limited.

3.5 DEMOGRAPHICS

Male Vs. female

Traditionally haulage companies address their recruitment efforts to males for most occupations. The following Figure 3.9 illustrates the small proportion of female workers in road haulage[2]. This proportion is roughly speaking about 10% of the total employment. Moreover, figures for the UK indicate that this proportion is only slowly growing (12% in 1981 Vs 14.5% in 1991). However, these figures could be an underestimation, because female family members sometimes work informally, doing administrative/clerical tasks. This group is not always registered officially in the statistics.

Figure 3.9 Proportion of female workers

Country	***Proportion of female workers in road haulage***
Belgium	9%
France	12%
Netherlands	9%
United Kingdom	14%

The proportion of females varies strongly per occupation. Hardly any females are found in the driver profession: 0% in Greece, 1% in Holland, 2% in Portugal, 4% in Germany. The "male-character" of the job has to do with the content and environment of this job: long and irregular working times, physical strength needed in loading and unloading (although less relevant than in the past), "macho-image", acceptance by (male) colleagues. Many companies are still reluctant to employ women as drivers. Female drivers, if they are found, are often members of the family owning the company. The Courier transport services is an example of a subsector in which more female drivers are found. For example in the DHL-case in Germany, the proportion of female drivers is 10%.

Most females are found in administrative/clerical occupations. In Luxembourg and the Netherlands, the proportion of females in these occupations is around 50%. Planning, management and warehousing are still typical "male" professions, although not so extreme as in the case of drivers.

Age Groups

The core age group in road transport seems to be the age group 25-44. In the Netherlands, the proportion of this group is 60%, in Belgium even 68%. The proportion of 25-40 years old in the UK is 43%. Drivers in particular can be found in this age group. Because of the ageing of the population the group of young workers has declined. The proportion of those younger than 25 is small (7% in France and the UK, 12% in Belgium and the Netherlands). Another problem in employing the youngest group is that it is sometimes difficult to get insurances if a company wants to make use of young drivers. This point is especially relevant for the UK.

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[2] The following figures refer to Hire and Reward companies. Less is known about the proportion of females in own account transport. Only in the Netherlands specific own account figures are given. These figures support the conclusions for Hire and Reward.

In the coming decades the proportion of those older than 40 will increase in the working population. This ageing of the working population causes two problems:

- The reduction of the inflow of young workers means that the sector cannot fully rely on relatively young workers on the labour market for recruitment practices. If the sector keeps on growing (as prognoses also indicate), other groups have also to be found. The first group the sector will aim at will be the traditional employed group of low educated men. However, the proportion of this group in the future labour supply is also decreasing. Broadening of recruitment practices towards new (growing) groups on the labour market like females and ethnic minorities seems to be crucial to ensure enough inflow of new personnel.
- From a survey among drivers in the Netherlands it appears that in general older drivers have more problems with long working weeks than younger drivers. Also health problems could occur at older age, like problems with the back. The ageing drivers would increase the need for finding alternative work for those who have problems. However, it is difficult to offer alternatives. Career paths within road transport are not really available. The driver occupation is the far most important occupational group. Moreover, even if other occupations are available, it will not be easy to fulfil the new job adequately, because skill needs increase for occupations like planners. The borders between the occupations become more discrete.

Traditionally an important "escape route" for older drivers in the hire and reward sector is to move to the own account sector, in which overtime hours are few and most transport is national. However, in the future the possibilities for using this alternative could reduce because own account transport is expected to loose further market share.

3.6 WORKING CONDITIONS (PART-TIME VS FULL-TIME)

Working part-time is rarely found within this sector. The countries having figures for the number of part-timers, all point to a proportion of part-timers of about 5% (Belgium: 4.6%, GB: <4%, Fra: 3.8%, NL: 7%). In a way, this could be an underestimation, because family members sometimes help informally in the business, but are not always counted as workers.

It is unusual to find part-time work among the drivers. Working more than full-time is normal practice for a lot of drivers. A survey in the Netherlands among drivers shows that on average they have about 15 hours overtime a week. In own account transport this is less, but still substantial: 6.5 hours.

When trying to explain why there is so much overwork done in the sector, one should realise that both employers and employees profit from overtime (at least in the short run):

- the possibility of overtime offers the employer a lot flexibility in coping with the work-load. Flexibility requirements caused by the imperatives of the distribution industry are essential in the competition with others.
- overtime offers employees the possibility of increasing their income substantially. Overtime hours are often rewarded extra.

In this context, the position of the own drivers is also of special interest. Often working as a subcontractor, their competitive situation is often difficult and margins are low. In order to "survive" they try to work as hard as possible. Because they are independent workers, their working times are not restricted by collective agreements of the social partners.

Although the long working hours could be profitable from the viewpoint of individual workers and employers, the effects on the sectoral level could be less positive:

- Long working hours can lead to more accidents. Because road safety is considered more and more important by governments, the political pressure will increase to diminish overtime.
- Long working hours can lead to working disability at older age. The heavy work-load in combination with time pressure can in the longer run lead to physical complaints in later years, the treatment of which can be costly.
- Long (and irregular) working hours is a barrier for women to enter the sector. When the expected increase of the sector in occurs, recruitment problems could result because working conditions are not favourable for groups like women.

- Last but not least: the long working hours are not a favourable condition for training. In a survey among Hire and reward companies in the Netherlands, the long and irregular working hours is mentioned as the far most important bottleneck for investments in training. It is difficult to know when to plan courses as drivers are so often on the road.

If desired, the following ways could be pursued in order to limit overtime:

(i) Further development of existing legislation. Both at European, national and sectoral level, regulations exist and are further developed to limit overtime and long driving hours.

Case Example : France

An example of a recent arrangement at the sectoral level is a French social agreement of 23 November, 1994. This only applies to "long distance", that is to say to drivers who do not regularly return to their home. This agreement no longer concentrates on driving times, but also takes into account time passed in loading and unloading, in administrative formalities, in maintenance and waiting time. Under this legislation, total "service time" cannot exceed 11 hours per day, 55 hours per week, and 60 hours on an isolated week, with a maximum of 240 hours per month, including the creation of a system for recuperation hours above the threshold of 200 hours, which constitutes the objective to be attained by 1 January 1999, in the framework of European harmonisation.

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(ii) Helping companies to cope with flexible demand. Labour pools, or employment offices could offer drivers for temporary work.

Case Example : GPdW (The Netherlands)

One of the cases of this survey is a sectorial employment service for temporary work in the Hire and reward sector in the Netherlands (the GPdW). The GPdW is exempted from the legal stipulation that transport companies must man their vehicles with their own permanent staff. The GPdW is managed by the social partners and started its activities in 1988. The placement activities are carried out in regional GPdW establishments. The total number of applications fulfilled by the GPdW rose from 5,000 in 1990/1991 to 14,000 in 1993/1994.

Temporary drivers go to a variety of companies which differ in product, material and region. A temporary driver has to be flexible and stress-proof, and be able to turn his hand to almost anything. This is why training is seen as essential by the GPdW. On average, 5% of the working time is spent on retraining. Most of it is done on the job, supplemented by a few days of formal schooling. Training in driving proficiency accounts for more than half of the schooling.

(iii) A different organisation of labour within companies. Some companies work with alternative working systems. Central to those systems is the fact that the traditional tie between a driver and his truck no longer exists. In such a system a driver for example only drives some standard routes between distribution points. Another driver takes the truck at the distribution point and is responsible for final delivery. The "distribution point driver" takes another truck which has been loaded at a customer and drives back to the original distribution point.

Such alternative working systems lead to a more structured planning of labour and more regular, standardised working times. A variety of such systems exist. Examples are the so-called "postilion system" and the "navette-system".

These solutions are directed towards working times in general. However, in the framework of this study, the related problems of organising training are of special interest. Are there more specific ways to stimulate training in the present situation of long working times? Some of the answers might be:

- Organising training on Saturdays. Many external training courses are already organised on Saturdays. For example in Luxembourg, a specific course for drivers, organised by the Ministry of Education, was held on Saturdays. Saturday could be used as a "training day". Most work is done from Monday to Friday. However, one

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should keep in mind that drivers want to keep Saturdays for their family and social life. This is important for them, because they are often not at home during the working week.

- Subsidising the lost wage costs. Organising training in working time means a disruption of the planning and a lot of opportunity costs for the company. This is why the Dutch sectoral training organisation sometimes not only subsidises the direct training costs but also part of the lost wage costs.
- Making more use of distance learning. Many brick cabins offer the driver possibilities to use tapes and videos. This seems to be a very promising way, which is not exploited fully. Only limited examples exist of distance learning which could be used by drivers on their journey. One such an example is a set of videos developed by the German employers organisation BDF in the field of safe driving.

3.7 THE ROLE OF THE SOCIAL PARTNERS

The social partners have had a greater or lesser role to play in the development of national road transport activity according to the Member State in question, but nonetheless at the global level have had important input in the following areas:

- collective negotiations in the road transports sector;
- identification of sectoral training needs;
- definition of training policies and their development;
- implementation of vocational training actions; and
- recognition of professional qualifications.

The structure of the social partners is highly correlated with national traditions in the areas of social dialogue between the social partners and collective bargaining at the national level. In those countries with a long tradition of social dialogue, the social partners are typically supported by a larger infrastructure and play a more active role in developing the sector, specifically in the social area. The countries that fall into this category are France, Denmark, Belgium, Holland, Luxembourg and the United Kingdom. In other countries, such as Portugal and Spain, the social partners do not have such a long tradition of involvement in policy and legislative decision-making, but now play an important role in the key policy and legislative issues in the road transport sector.

The organisation of the social partners and the inter-relationships between them vary significantly from country to country. Figure 3.10 shows in graphical form the information provided in the national sectoral reports concerning the role that the social partners play in the different Member States.

The following paragraphs highlight some of the most notable differences in terms of the scope and intensity of the role of the social partners in the road transport sector.

In Ireland and Greece the activity of the social partners is disparate and there exists a relatively low level of inter-relationships between the social partners. In these countries, where the road transport sector is characterised by a very high level of small companies, sectoral collective agreements do not apply to the private sector, covering only state-owned and part state-owned companies. These companies represent only some 10% of the goods transport market in Ireland and in Greece only the road passenger companies that operate in Athens. It is important to underline, however, that in Ireland the social partners have developed various efforts in term of analysing training needs in the road transport sector.

In the Benelux countries, in contrast, the social partners have exercised a very active role in all social domains linked with the road transport sector, within which special importance is given to vocational training, both in terms of the implementation of vocational training policy and the execution of vocational training courses. In Holland, for example, several of the most active training institutes in the road transport sector are managed by the social partners. In these countries the social partners are also given a very important role in the definition of policy guidelines concerning working conditions in the sector.

In Denmark, there is also a strong tradition of active involvement of the social partners in the road transport sector, especially as concerns the area of professional training. The involvement of the social partners encompasses the development of training courses that are then administered by employer associations, unions and other social partners. The public sector also provides a specific framework for vocational training in the road transport sector, with private institutions also providing vocational training for the sector.

Another country with a strong tradition of the involvement of the social partners in the policy and legislative area is France. In this country, the very first vocational training actions were in fact developed by the social partners,. and it continues to be the social partners that have the lead role in defining the training needs for the sector. The social partners are also responsible for promoting vocational training in the private sector and actually provide resources to small and medium sized companies to carry out training courses. There exists a very close working relationship between the social partners and public entities for the definition of social policy and working conditions.

In Portugal, although the tradition of social partner involvement in policy and legislative decision-making is not as strong as in other countries, the social partners now play an important role in the road transport sector and particularly in the area of vocational training. As vocational training by private sector companies in the road transport sector has been scarce, the social partners have taken a lead role in both defining training needs and developing training courses - supported recently by a vocational training agreement signed between the Government authorities and the two largest unions - as well as implementing vocational training policy through the creation of the only vocational training institute focused on training in the road transport sector. The social partners also carry out specific vocational training courses themselves.

In the United Kingdom, the social partners are well represented at the national, local and sectoral levels. The social partners participate in policy and legislative developments at all three levels and are particularly active in the areas of working conditions in the road transport sector, analysis of training needs, as well as in the provision of specific vocational training courses.

Figure 3.10 The Role of the Social Partners in the Road Transport Sector

Countries	Collective Negotiations	Identification of Training Needs	Definition of Training Policy	Implementation of Training	Recognition of Professional Qualifications
Ireland	◗	▲	◗	◗	◗
Greece	◗	◗	◗	◗	◗
Portugal	●	▲	▲	▲	◗
United Kingdom	▲	▲	▲	◗	▲
France	●	●	●	●	●
Holland	●	●	●	●	●
Denmark	●	▲	▲	▲	▲
Belgium	●	●	●	●	●
Luxembourg	●	▲	◗	◗	●
Spain	○	○	○	○	○
Germany	●	●	◗	▲	●

KEY:

● Very Active Role ▲ Active Role ◗ Minimal Role ○ No information in national reports

4 - TRAINING IN THE ROAD TRANSPORT SECTOR ACROSS THE EC

4.1 INITIAL TRAINING

Introduction

Following many years of relative stability, the road transport sector experienced radical change from the mid-eighties onwards, with restructuring driven by market forces and regulatory developments. The scope and degree of change left no area of the road transport sector untouched, leading to new ownership structures and modus operandi, as well as the introduction of new technologies in many areas of activity. One of the key areas of change has been in relation to the minimum level of qualifications and skills required of drivers, operators and other technical and managerial staff, both at the entry level as well as on an on-going basis throughout their careers.

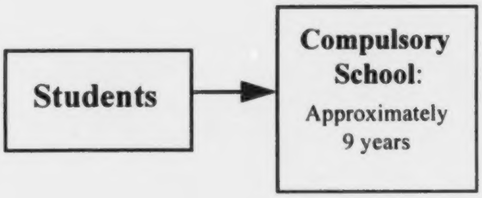
The association between the profile of road transport companies and particularly the ownership structure and minimum entry qualifications is strong. In a sector where micro family companies pre-dominate, structured admission procedures are often relegated behind family ties in recruitment procedures. Furthermore, the road transport sector has traditionally been a haven for unskilled and lower skilled workers and one where there has been a marked lack of specialised vocational training. This combination of factors has led to a sector where the average worker is less well qualified than in other sectors of activity, with many having only the very basic schooling. In the mid-eighties, there were several countries such as Portugal and Spain where more than 50% of all workers had only four years of formal schooling. Even in more economically developed countries the percentage of unskilled workers remained high. In Denmark, for example, slightly more than 50% of all drivers were classified as unskilled workers and in the Netherlands, some 30% of drivers had only primary school education.

However, since the mid-eighties there has been increased competition, internationalisation of the sector, more rigorous customer demands, technological and other developments in the sector. These have forced significant changes in the operations of many road transport firms and consequently in the minimum skill and qualification requirements.

The European Community reacted to the changing demands made on road transport workers and professionals by passing new laws aimed at harmonising access to the sector across the Member States. In 1989, Directives 74/561 and 74/562 (concerning access to the profession of road transport of goods and passengers in the national and international domain) were modified by Directive 89/438. This Directive brought profound changes to the system of initial vocational training for road transport workers. The establishment of minimum requirements for access to the profession contributed in the late eighties, early nineties, to the restructuring of the vocational education system for the road transport sector in those countries where this type of education had not yet been developed.

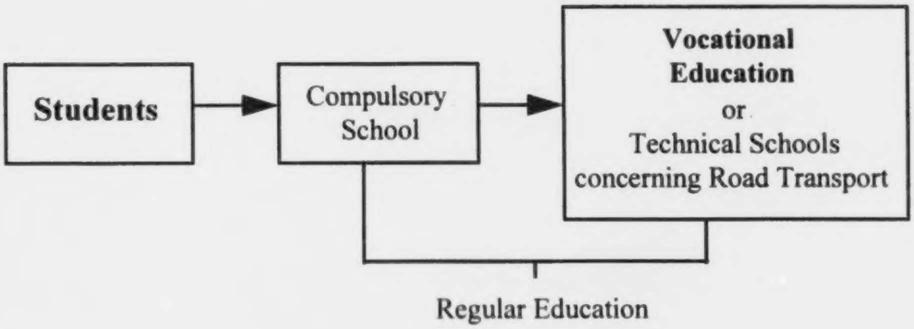
Regular education

The journey of the student begins at an early age in a compulsory school. According to each member state the compulsory school takes approximately 9 years to be completed (there is a tendency, in all Member-states, to extend this period).


Students
Compulsory School:
Approximately 9 years

After this period the student follows a vocational area according to his preference, thereby gaining the opportunity to go to a university. It is precisely in this period that new introductions were made. However, we noticed from our reading of the various National Reports that the type of courses on offer in this area differs from country to country according to the tradition of vocational training in road transport and each country's basic education. In France and the Netherlands, vocational training is already very advanced. Although several schools, institutes and private entities already provided training there, changes have been made - particularly in terms of quality and contents.

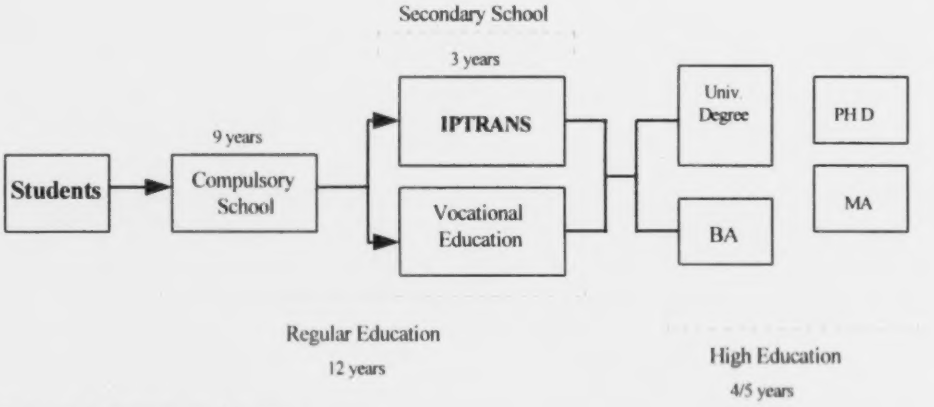
In Greece, Portugal and Germany, technical schools were created to provide vocational training in the road transport sector. These schools comprise part of the last years of secondary level of the regular education in these countries.


Students
Compulsory School
Vocational Education
or
Technical Schools concerning Road Transport
Regular Education

In Portugal, Ireland and Greece these courses are only available in a few institutions such as IPTRANS in Portugal and Bolton Street in Ireland.

For example, Portuguese students when they finish compulsory school have the chance to follow Road Transport Sector studies by entering IPTRANS (Portuguese Transport Institute). This is a technical school that was the result of the initiative of two of the most important social partners of this activity - ANTRAM, as a representative of the employers and FESTRU, as union representative.

As an example of how students nowadays have the choice of an education within the transport sector, the following diagram shows how the new institute is positioned in the Portuguese education system.



BA - BA Honours degree
PH D- Post-Graduate Courses
MA - Masters degree

In France for instance, there exists a choice to enter initial vocational training in this sector. The student can choose between technical levels of vocational training schools and advanced specialisations in the transport sector. In the Netherlands, we can see that the same choice exists; from lower level vocational education to general higher secondary education or even university level. In other countries with less of a tradition of vocational training in the transport sector eg. Portugal, Greece, Luxembourg, Ireland, Belgium and Germany, various courses from medium to lower university levels and BA degrees began to emerge.

It is important to mention that anyone who has finished studies long ago and is in employment, now has the chance to re-enter vocational education, in a non full-time course, and follow the vocational training in Road Transport Sector.

Other courses

Two kinds of courses exist in this sector: specific courses and general courses. Specific courses are included in the regular education system but there also are specific courses which are not included. IPTRANS in Portugal is an example of a school included in the regular education system where students at compulsory school-leaving age can continue their studies in the vocational subject of transport.

In most EU Member-states there is a vast range of other courses within the transport context. From sales management and information technology, to logistics and foreign trade. For small countries with a great tradition in international road transport, like the Netherlands, the knowledge of foreign languages eg. English, German and French, is of growing importance.

Apart from the regular educational system, an apprenticeship system also exists in some countries. This system provides some courses around a 3 to 6 week or longer period of technical training. These courses include diverse subjects such as traffic regulations; road safety; first aid; customs clearance; collective agreements to different levels of mechanics. In countries like Germany and the Netherlands these courses are a reality. Both the Netherlands and Germany have an apprenticeship system for drivers, although in Germany this is not often used. In Luxembourg, the apprenticeship system exists for clerical/administrative jobs in the sector.

Access to the profession

To become an operator in the Road Transport Sector, it is necessary to reach the level of competence according to the community directives mentioned above.

Professional competence for international road transport operators is achieved having passed an examination covering areas such as safety, maintenance, law, international operations, commercial management. Member-states may allow for exemption from this examination where the applicant has had at least five years of practical experience in a management position. This examination is, according to the relevant EC Directive, appropriate for candidates with a level of education to compulsory school-leaving age.

In order for potential operators to prepare for this examination, each Member-state organises various compulsory preparation courses. However, as EC legislation does not specify the level and contents of the course work for which examinations are obligatory, there are wide differences between countries in the structure of the courses required to obtain the certificate of professional competence. In fact, only in the United Kingdom is it not mandatory to take a preparation course prior to sitting the professional examination.

This situation, and the existence of mutual recognition of the certificates of professional competence across the European Union, has led to marked trends in the flow of drivers and other professionals obtaining operating licences in the UK (the preparatory courses for the professional competence examination vary from 65 hours in the UK to 300 hours in the Netherlands).

To work as a driver, it is only necessary to obtain the relevant goods and passenger transport licences in each country. This is true for all countries apart from the Netherlands. In this country, drivers must have the required driving licences and moreover possess the CCV-B certificate of professional skill.

In all countries a dense network of private driving schools exists providing practical driver training for the goods and passenger driver's licence. These mandatory courses differ from country to country according to the type of transport service provided, e.g. goods, dangerous goods and passengers. For example, in Germany, in order to receive a licence to drive public transport vehicles, vocational training is given by a technical control board from some private institutes.

Funding

In relation to funding we noticed that compulsory schooling in regular state schools, for most Member states, was free. However the vocational school outside the state schooling system (private schools) regarding regular and non-regular education, must be paid for by the trainee. In this case the student must pay for his vocational training and for his drivers licence. This occurs in most of the Member States of the EU because most of the companies in the sector will not agree to pay for vocational training of students. This however would be an investment for them.

In some countries where the tradition in road transport is more advanced, the employees and employers contribute with a small percentage of the wage bill (levy) to obtain training, eg. in the Netherlands a collective agreement was made to levy 1.147% (employers and 0.215% (employees to be paid to SOOB, the Training and Development Fund for Professional Haulage. The sums involved are distributed for an important part to the vocational training institute of the sector. In Belgium, firms contribute to social fund which is also involved in organising and facilitating training.

At a vocational education level we were able to identify that, according to each community member's background in the road transport sector, there are several kinds of promoters. Some private institutes, social partners, professional associations and, of course, the state itself, all contribute to providing vocational training courses.

Recruitment conditions

Even today a large number of companies in the road transport sector are still family-run. As a consequence, the recruitment conditions follow some patterns that do not fit with the present standards of initial training and do not represent a healthy procedure for the transport sector.

In countries like Greece, Portugal and Ireland the recruitment of drivers is at times a result of their family connections. In other countries such as Luxembourg and the United Kingdom, experience is the condition required for the employment of new drivers. In Germany and Belgium, no special qualifications are required. However, this situation started to change in the last 3 or 4 years - companies are giving priority to the training level in their recruitment conditions: France is a good example of this recruitment policy.

Conclusion

From the analysis of the various National Reports we can conclude that there are some countries with a greater tradition for initial training in the Road Transport Sector (eg. France and Netherlands). In these countries changes have been made to improve and diversify the range of subjects available, in order to satisfy the new needs of the sector (resulting from the impact of the Single Market and the international trends, such as the increased competition - see Section 2.4.1.). Initial Training is seen as an important factor in the development of the road transport sector.

Those countries with less of a tradition for vocational training in Road Transport (for example, Portugal) are making greater efforts to improve their levels of standards and to increase and diversify the supply of initial training. We can say that in the last years they have started looking to initial training as the only way for companies to survive in the European market.

4.2 CVT ACROSS EUROPE

Each of the national sectoral reports discusses the provision of continuous vocational training in the individual countries. There are various different types of training providers but in general it is possible to group them into three areas: Social Organisations, Commercial Training Services and Road Haulage Companies.

Main Types of CVT Providers across Europe

(i) **Social Organisations**

Employers associations, Trade unions, Unemployment Services. Training of trainers and various courses run on an external/internal basis.

(ii) **Commercial Training Services**

Training of trainers, various courses run on an external/internal basis for road haulage companies

(iii) **Road Haulage Companies**

Trained trainers design and implement customised training courses

(i) Social Organisations

This is the grouping in which CVT appears to be at its most developed. The various social organisations consist of groupings of representatives of industry, vocational training organisations, employer/employee unions, local councils etc. These representatives have got together to develop courses and offer them as mainly external training options to road haulage companies. The advantage of this type of co-operation is that the expense of the courses can be spread across as large a number of companies/individuals as possible. Where there are sufficient numbers, courses can be specially designed and offered in-house to individual road haulage companies. Another important advantage is that smaller companies can make use of the external training facilities. Without such an external supply, they probably would not have been able to organise CVT.

Initially, the main impetus for the setting up of these social organisations came from the EC directives on training and professional competence in the industry. Gradually the appreciation of the benefits of training grew and general training courses added to the range of available training. For example, in addition to the ADR hazardous goods training courses and the certificate of professional competence, there are now courses widely available on the topics of logistics management, driving under stress, customer care, safety and warehouse control - to name but a few.

The nature of collective bargaining in each country also tends to have a direct impact on how training by the national social organisations is operated. In the Netherlands for example two collective agreements influence the development of training in the road transport sector. The agreements also cover important areas such as wages, wage increases, grading systems, bonus schemes and working hours. Training is therefore very much a fundamental element in the collective agreements and agreed training contributions must be paid to a central training fund. Consequently there is strict control by the represented unions over the implementation of agreed training plans and budgets. In addition, because training by the social organisations is partly financed by the levies, courses by the commercial institutes are less prevalent.

One of the goals of the social organisations is to encourage the growth in the number of people and companies participating in training. This is often done by offering training courses for trainers who already exist in companies or to people who are involved in the personnel/human resources area but who have not yet become active in the training field. By training trainers it is possible to encourage the development of in-company training or to at least make trainers more aware of the need for employees to attend the available external courses. One of the effects of trainers or company representatives being trained has been the growing tendency for road transport companies to provide introductory and induction programmes for new recruits.

Without training by social organisations, certain groups (minorities or less well educated people) would not participate in training. If the social organisations develop courses for these types of groups then their participation in the sector could be improved.

(ii) Commercial Training Services

As already mentioned, the existence of commercial training organisations is strongly influenced by the range of training courses on offer by the social organisations and by the existence or otherwise of collective bargaining agreements. The Belgian report stated for example that there were no such commercial training courses found in the Flanders region and that only two could be identified as having contributed to the ADR hazardous goods training in Wallonia (i.e. *Ability* and *Pfeiffer Institute*). The Netherlands report, however, indicated that private institutions did exist and these tended to offer mandatory training programmes such as ADR and professional competence.

Most of the section dealing with the supply of continuing training programmes dealt with social organisations, although it was mentioned that some of the private institutions did also offer courses such as storehouse management. Meanwhile, it has been said of the UK that a strict interpretation of contractual policy on CVT risks overlooking significant, but largely informal, consultation and collective bargaining over training (Contractual Policies Concerning Continued Vocational Training in the European Community Member States, FORCE 1994). The UK does appear to have a more informal approach to collective bargaining and CVT standards are often led by employers. Commercial training companies appear to work closely with social organisations, trade organisations and employers in general. For example the proposed Euroqualification, which is described below, is being tested in the UK and is being operated in close co-operation with the Road Haulage and Distribution Training Council and RTT Training Services who in turn have received financial and moral support from the local Training and Enterprise Council.

(iii) Road Haulage Companies

Not surprisingly, it is the larger companies involved in road haulage who tend to design and undertake their own in-house training programmes. Smaller companies are only training relatively few people at a time and will therefore tend to send them to external courses. Examples of the larger companies include the Royal Mail and Anonymous cases in the UK, TFE in France and Trans-o-Flex in Germany.

Trans-o-Flex for example has 2,500 employees and is part of a group which operates 3,481 vehicles. Trans-o-Flex has integrated CVT as part of its overall business strategy. As a result CVT is considered an instrument to implement business objectives such as holding a leading market position, optimum customer advisory services, development of new services and establishment of a European Network. The company has therefore developed a concept of *'success oriented CVT'*. In addition, its dangerous goods division has trained some employees to be internal instructors for the mandatory courses. Seminars on dangerous goods are held at the Company's training centre which is based at the head office.

An important point of the training of Trans-o-Flex is that is also available for other - often smaller and often subcontractor- companies. The passenger transport and own account company case in the Netherlands are other examples of companies which offer CVT to their subcontracting road transport companies.

In contrast to Trans-o-Flex there is a medium sized company in Germany, Edgar Grass GmbH & Co, which offers its employees access to *external* training. The training seminars take place once a year with a duration of two to three days and are conducted either by manufacturers (Mercedes-Benz, Scania) or the regional vocational training centre. Training in the transport of hazardous materials is conducted by the local driving school or in the company by the representative in charge of hazardous materials.

Small road transport companies, such as Blueflite in Ireland and Transports Baonville in Belgium, tend to have difficulty in justifying the cost of training, in sparing employees for courses and in spending any length of time on the development of a training policy. The main focus of the owners and managers is on survival of the company in a highly competitive market and on the day-to-day management of the business. Good intentions generally prevail but training will often be made available as a reaction to a need which arises rather than as part of a proactive, carefully developed plan. For example, Transports Baonvilles which has just five drivers, does not have a training scheme per se but employees have attended training on an ad-hoc basis over the years given by a representative of the company's truck dealer. Employees also attend courses with the Professional Union of Roadway Transport (UPTR) and all employees attended training in relation to hazardous goods with which they were very pleased.

It is apparent that the drive towards ISO certification and the legal requirements for training in the transport of hazardous goods have both been important in forcing companies to focus their minds on the needs for training. The ISO scheme requires a company to devise a profile for every employee and to develop a training plan for them. Often the ISO or quality manager is involved in encouraging their companies to establish and improve training systems as part of the overall quality drive. Similarly the benefits of training for hazardous goods have become apparent to companies and staff and there is a resultant desire to maintain a certain level of training thereafter.

In addition, many road transport companies have benefited from training which is provided by the customer. For example, the Shell oil company provides training for its road transporters. The training is provided at Shell offices and by Shell trainers. Shell benefits by knowing what level of service to expect and the transport company also benefits by retaining the Shell business and by having more effective employees.

4.2.1 Developments in CVT: The Euroqualification Project

The Euroqualification project is co-financed by the European Social Fund (ESF) and is a joint initiative of the 12 EC Member States which aims to help the unemployed obtain work in a transnational employment market. The proposals are being tested in the UK under the co-ordination of the Road Haulage and Distribution Training Council (RHDTC) and various training organisations in France, Holland, Spain and Ireland. All Euroqualification trainees complete a formal development course in their home country and then visit - via formal exchanges - other countries for further training and work placements. To date the RHDTC has looked at Euroqualification in three main occupational categories: driver international, traffic planner international and transport manager international.

By operating a Euroqualification scheme it is intended that truly transnational standards of job competence will be developed. The result will be training programmes which are matched against agreed occupational profiles and more closely recognised methods of instruction and assessment procedures. Initial results have been very encouraging in that the RHDTC claims it has learnt much from other countries approaches, methods and timescales for training. It is hoped that the test project will result in a transnational Euroqualification or at the very least establish a set of qualifications within Member States which can be recognised throughout the Community.

All of the Euroqualification trainees were selected from among the long term unemployed who had no previous vocational experience in the road transport industry. At the end of the first phase of the project 22 of the 32 trainees who successfully completed their studies were awarded a certificate to mark their international achievements and had found full time jobs in the road transport industry.

4.2.2 Bottlenecks in the Training System

Certain characteristics particular to road transport are working against the effectiveness and development of CVT in that sector.

Small Company Constraints

Many of the smaller companies state that the reality of their business is that they cannot spare the staff to attend courses or the time to develop long term training policies. This is significant as a high proportion of companies are relatively small - Figure 2.18 in Section 2.4.3 shows that between 70% and 98.5% of companies have less than five vehicles.

Unconventional Working Hours

The unconventional working hours of the drivers, who represent the majority occupational category, also work against the development of traditionally structured training courses i.e courses which are provided at central training headquarters, during "normal working hours", and to groups of students who are all available at the same time.

Fear of Poaching of Trained Employees

Many companies are reluctant to spend money to train their employees as they feel that it merely results in other companies poaching their valuable staff. One of the advantages of imposing a training levy on companies as they do in the Netherlands, Belgium and France is that those who do not train staff still have to pay certain amounts while those who do train staff now have to pay less for the training (as the cost is being shared by all companies). In this way the threat of poaching is reduced.

Lack of a Training Culture

To date there has been a general lack of a training culture in road transport companies. This means that training needs are not reviewed regularly and as a result management are not aware of them. The situation has arisen as a result of the low level of education required for new recruits. Driving experience has been all important and the need for communication skills, data management, route planning etc and the focus on service quality have only become apparent relatively recently. As such there is still a relatively low appreciation for the benefits of continuous training and management are only beginning to become more aware of the training requirements of their employees.

4.3 TRAINING BUDGETS AND COSTS

Introduction

An analysis of expenditure on CVT by the companies involved in this study is provided in the matrices in Figure 4.1. However, it is difficult to make international comparisons or inter-company comparisons. The notes to the matrices will illustrate the difficulties which arise in attempting such analysis. Basically, the difficulties result from a lack of information. Some total cost figures have had to be averaged over the total employee numbers even though it is clear that not all employees were trained in that year - average participant costs would be more accurate. Some reports also provide cost information but do not detail expenses or wage costs which are included, while some company costs are presented without these figures included. In addition figures are given for a mixture of 1993 and 1994. Although figures were requested for years prior to 1993 almost all companies were either unable or unwilling to give details. As a rule, their management information and accounting systems do not identify training costs - either direct or indirect.

Many companies were reluctant to consider the costs associated with training as separate "costs". Some said that costs were viewed as an investment and others pointed out that their continuous training was very closely linked to normal work practices - so that they saw no need to separate the time or wage costs from normal operating costs. For example, if a company holds regular staff meetings where training needs or new work processes are discussed then that is considered to be CVT but cannot be easily identified in cost terms.

It appears that many companies are only beginning to focus on training to any significant extent and that their records for training undertaken in the past are therefore inadequate. Typically in those companies with - or in the process of obtaining - ISO certification, concern for and planning of CVT is at a much higher level than the rest of the marketplace. These companies are now developing methods for identification and accounting of CVT.

Budgets

From the case study reports for this survey it is apparent that very few companies set budgets in advance of their training activities. Three examples only were evident i.e. two in the UK which had nominal budgets of £4,000 and £4,500 per annum and one in Denmark which had a budget of 100,000 Krones per annum but budgeted separately for wage costs incurred in training time.

However, some of the bigger companies have dedicated training centres which they use to train staff from all over their country, Europe or even the world. It is assumed that these centres have budgeting systems even though they are not presented in the case studies. For example, Du Pont in the UK uses its Stevenage site as the training centre for Europe. They have calculated that running their courses on an internal basis saves them over half of the costs that would be incurred by running the courses on an external basis. Brink's in France also has its own training centre as well as an internal training school for the training of executive personnel. It is likely that there are detailed budgets for both of these companies' training activities although they are not detailed in the case study reports.

The Irish company, Irish Express Cargo, said that while they did not have budgets for training they would be willing to spend money during the year if it became apparent that training was needed. This may be typical of the smaller companies who have not taken a proactive approach to developing CVT but who are not necessarily against implementing training if it is clearly demonstrated that there is a need.

Sample Size and Cost Benefit Analysis

An analysis of expenditure on CVT would ideally require a larger (statistically significant) sample set of companies within each sector of freight (e.g. dangerous goods, fresh foods, money, general goods). A survey should also be planned in advance with the companies involved so that they could record expenditures and statistics relevant to the study rather than trying to analyse costs on a retrospective basis. Trend information or a larger timeframe would be most useful rather than a picture of training in just one year. This is important as not all courses are carried out every year and not all employee groups receive the same amount of training every year. For example, if the complete Human Resources Development Programme of Kuhne & Nagel in Germany was to be followed by an employee it would take 6 to 8 years.

It is of key importance that the benefits of training be analysed as well as the costs. Such a cost-benefit analysis would be of great interest to the road freight transport companies who are not sure if training investments are worthwhile. Models for such an analysis are currently being developed and Appendix I to this report suggests a framework for calculating the economic return of company training in road transport. Until such an examination is carried out there is only a limited benefit from the results presented in Figure 4.1.

Caveats to the Interpretation of the Cost Matrices

The notes to the matrices in Figure 4.2 illustrate the different bases for calculating the average cost per person figures for each company. Key differences include:

- inclusion or exclusion of wage costs and expenses
- Per Person means either per participant or per employee

These differences mean that little direct comparison can be made. The average ECU per capita spend is calculated for each country for comparison purposes but the same caveats apply.

Only France and the Netherlands provide information on expenditure in terms of percentage of wage costs. France appears to spend comparatively more in this regard. France also appears to have a comparatively higher average ECU spend per capita. As stated in the notes, this may be the result of two factors. Firstly, the Average Cost Per Person calculations for each French company are on a per participant basis and are, therefore, averaged over a smaller pool of people than if they were on a per employee basis. Most other country calculations are averaged over all employees.

Secondly, the type of companies profiled in France provide fairly specialised transport services which require more specialised and therefore possibly more expensive training. In addition, the companies profiled for France are relatively large and, therefore, have more funds available.

Figure 4.1: Expenditure on CVT in Case Study Companies

	% of wage costs	Home Currency	IR£ ex rate (1994)	ECU/IR£	ECU per capita	Goods Carried
Greece						
Eschilos		146,846.00	362.98	1.2602	509.82	Dangerous Goods
3E		267,350	362.98	1.2602	928.19	Soft Drinks
Small Cos		200,000	362.98	1.2602	694.36	General
KTEL of Evros	n/a	n/a				Passenger
					710.79	
Ireland						
Blueflite		1016	1	1.2602	1280.36	General
Irish Express		86	1	1.2602	108.38	General
		750	1	1.2602	945.15	
Bell Lines			1	1.2602		Food/Chemicals
					777.96	
UK						
Du Pont		250	0.9778	1.2602	322.20	Dangerous Goods
Passenger	3.28	400	0.9778	1.2602	515.52	Passenger
Langdons		160	0.9778	1.2602		Food
TDG Group		223.53	0.9778	1.2602	288.09	General, frozen foods, chemicals (i.e. across all sectors)
Lucketts Travel		91.84	0.9778	1.2602	118.36	Passenger - Coach tours
Lane Group				1.2602		General
Royal Mail			0.9778	1.2602		Mail
					311.05	
France						
STBC	3	5,095	8.2949	1.2602	774.09	Controlled temperature transport
GT Location		10,738	8.2949	1.2602	1631.37	Vehicle Rental
Brinks	3	14,062.50	8.2949	1.2602	2136.44	Money
SAEMT2C	2.2	3780	8.2949	1.2602	574.28	
SETRAP	6	7000	8.2949	1.2602	1063.47	
		21000	8.2949	1.2602	3190.42	
TFE SA		n/a	8.2949	1.2602		Controlled temperature storage & transport
COMAP	n/a	n/a	8.2949	1.2602		Dangerous goods
					1029.94	
Germany						
DHL		1960	2.4254	1.2602	1018.39	parcels
E Grass		695	2.4254	1.2602	361.11	dangerous goods
Kuhne & Nagel		698	2.4254	1.2602	362.67	general
trans-o-flex		229	2.4254	1.2602	118.98	general
KM-Reisen		529	2.4254	1.2602	274.86	bus and tourist travel
					427.20	

Italy						
Sinteco		632183.9	2412.07	1.2602	330.29	dangerous goods
Traini e Torresi		605177.9	2412.07	1.2602	316.18	general incl. chemicals
					323.23	
Portugal						
Amaral & Frias		17647	248.14	1.2602	89.62	general
Transportes Rodoviarios		145000	248.14	1.2602	736.39	general and chemical
Workshop		n/a				
					448.93	
Netherlands						
Daily Fresh Products	2.5					Fresh & Frozen food
Passenger	2					Passenger
Removal	1-2					Removal
GPdW*		2489.6	2.7199	1.2602	1153.50	General
Luxembourg						
Kuhne & Nagel		43,500	49.97	1.2602	1097.03	
Denmark						
Roland Munch						general
Adams Transport		952	9.5055	1.2602	126.26	Furniture removals and storage
Belgium						
Corneel Geerts		n/a				general
Vanneste		n/a				palletised goods
ISO 9000 Bus Union Training		4395.6	49.97	1.2602	110.85	public transport
Spain						

Figure 4.2

NOTES TO THE MATRICES RE EXPENDITURE ON CVT BY COMPANIES INVOLVED IN THIS FORCE STUDY

GREECE	
Eschilos:	This is the average cost per participant in that it includes wage costs. Most of the training is paid for by Shell who is a customer of Eschilos.
3E:	Wage costs and expenses are included.
Small Company Workshop:	Estimated average spend, Wage costs are included.
IRELAND	
Blueflite:	This is the average cost per employee as number of participants is not clear. Some courses were for 1,2,3 people. One course was for 35 people. Figure does not include wage costs
Irish Express Cargo:	£86 is the average cost per employee and is clearly an underestimation of the cost per participant as only a portion of employees received training in that year. Figure includes wage costs. If the cost is averaged over drivers only then it is increased to £750 per driver, but other staff did receive training also.
UNITED KINGDOM	
DuPont:	Figure is an average cost per participant and does not include travel and expenses. Training is provided internally. If external facilities were used, then the figure would be expected to rise to £500-£600.
Passenger:	Figure is averaged over total number of employees. It is not clear what is included in the figures, eg. if wages or expenses are included.
Langdons:	£4,000 budget for annual training - averaged over total employees
TDG Group:	This figure is an average cost per employee and not per participant. This may be significant as there are 8,500 employees, only a portion of which would receive training in any one year. It appears that wage costs are not included.
Lucketts:	£4,500 budget for annual training - averaged over total employees

FRANCE

All figures are calculated on an average cost per participant basis. This means they are more accurate than those calculated on an average per employee basis and may explain why the costs for France are relatively high. However, this may also be due to the fact that two of the companies transport dangerous goods, one carries goods under controlled temperatures and one carries money - all of which can require specialist (and therefore possibly more expensive) training.

It is not clear if any of the figures for France include wage costs.

Note: SETRAP estimates an average participant cost of between 7,000 and 21,000 French Francs.

GERMANY

DHL:	Figure is per employee in 1993 (1,500 employees in total) but appears to be fairly accurate because participant numbers in 1994 were 1,526 participants and plans for 1995 include 1791 participants.
Trans-o-Flex:	Figure is per employee and would be higher if per participant figure could be calculated. Includes wage costs.
KM-Reisen:	Figure is for 1993 and the company states significantly more training is planned for future years. Since a recent take-over. Figure is per employee.
Kihnet Nagel:	Figure is per employee and includes wage costs
Edgar Grass:	Figure includes wage costs

ITALY

Figures for both companies appear to include wage cost. Traini e Torresi appears to have significantly increased its spend in 1994 (which is spend presented here).

PORTUGAL

Amaral & Frias	Shell is a customer and does a significant amount of training, but is not clear how much. Figure is per employee.

NETHERLANDS	
	Only the case of GPdW provides figures for expenditure on CVT. However, the % of wage costs can be used to compare the Netherlands
LUXEMBOURG	
	It is not specified what is included in this figure for Kuhne & Nagel, eg. if expenses or wage costs have been considered.
DENMARK	
	A budget of 100,000DKK is set by Adams each year. This excludes wage costs which are budgeted elsewhere.
BELGIUM	
Transports Sadar	This figure is an average per employee and is clearly an underestimation as not all employees are trained.

4.4 FUTURE TRAINING REQUIREMENTS

Chapter 2 has outlined the key business strategies that road transport companies have been adopting. The forces of change which are shaping these strategies and the future of the sector are also identified. The sectoral reports all point to these strategies and the forces of change being the key indicators of areas where there are significant training implications for the road transport sector.

Some countries have a more developed range of training services than others. However, almost all see the need for an improvement in utilisation or take-up of training courses by companies. In France for example there appears to be a very diversified range of continuous training, both in the public and the private sector. The French sectoral report has analysed the availability and utilisation of that country's continuous training in the road transport sector and it provides a good summary of three influences which are shaping the supply of training:

(i) Professional & Regulatory Requirements

Training often develops as a result of professional and regulatory requirements which are enforced within the profession. Examples include the requirements for training for drivers of hazardous goods or for drivers who wish to obtain a certificate of proficiency or a relevant driving licence.

(ii) Human Resources & Training Management

In the larger road transport companies, a growing awareness of the importance of training is beginning to produce a culture of human resources and training management within companies. Companies are starting to take a more global view and to define training plans which fit in with their strategies and their objectives.

(iii) Made-to-Measure Training

Training of the made-to-measure style is becoming more common. In this situation, small and medium size companies employ a training expert or organisation to help to devise a training program which is needed particularly by that company. Examples given include courses which are needed to master one aspect of the company's business (financial/administrative skills, management, sales and communication skills); courses for certain professional categories (CEO, executive, operational personnel, loading bay personnel, drivers); courses for the acquisition of special techniques or "know-how" (Computers, social law, quality).

However, despite these positive influences on the development of training, all sectoral reports show that there is room for further improvement. The following is an analysis of the identification of requirements which exist across the countries involved in this report. As will be evident, there is a remarkable overlap across countries. Some of the more common training needs are presented below.

Common Training Requirements

New Technology Management: employees have to be trained in the operations and management of IT, EDI, satellite tracking and logistics systems.

Customer Service: customers are becoming more demanding and employees need to understand their role within a customer orientated organisation. Programmes such as Just-in-Time deliveries and customer feedback systems may need to be explained and tailored to the circumstances of the employees involved. Drivers are having to play the role of ambassador of the company and need training in the area of customer relations.

Integration of Safety Standards: Drivers need to learn to cope with stress, dangerous traffic conditions, advanced vehicle technologies etc.

Foreign Languages: the need for training in foreign languages is expected to grow along with the trend towards internationalisation of road transport.

Certain countries have different perspectives on training needs and on how to satisfy them. These differences usually stem from the varying levels of training which prevail in the relevant countries. In addition, the level of organisation amongst the profession and between the profession and the social partners or State services also appears to have an impact on training needs in each country. The level of sophistication of the national road transport sectors also has a direct effect on the emphasis placed on certain training requirements. The majority of training requirements identified encompass the following areas:

- **Developing Technology**

  Changes in vehicle technology and in methods of transporting specialised cargoes will require drivers to have more highly developed driving skills and more knowledge in the specialist skill areas. Changes in information technology (IT) also tend to be continuous - so that the training also needs to be continuous and provided to a range of occupational groups as few are removed from its impact. Office-based employees will need to be trained in the operations and management of IT, EDI, satellite tracking and logistics systems, as described in Section 2.1.4 Forces of Change.

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- **Concerns for the Environment and Safety**

While it appears that concerns for the environment are growing and may result in regulations being developed, these concerns do not appear to have been translated into training courses. On the other hand concerns for safety have led to calls for the introduction of preventive driving courses for drivers. Such courses would show them, for example, how to avoid obstacles, how to take slippery bends and how to deal with driver fatigue.

The publication Group Transport 2000+ strongly supports the training of drivers so that their attitude when driving can be improved. While technical changes to equipment and roads are accepted as being important, the publication states "*...The main cause for this high rate of accidents is in our opinion carried back to the drivers behaviour"*.

The UK sectoral report indicates the need for companies to anticipate legislative requirements in relation to safety standards as these are likely to require training for staff. The Lane Group and Royal Mail are two case studies which illustrate how companies can integrate safety standards within their general training programmes.

Section 3.5 also discusses the ageing of the workforce and highlights the fact that there are safety risks associated with this as older drivers are more prone to back and other health problems.

- **Focusing on Customer Service**

Customer care represents one area upon which companies must focus if they are to maintain or improve their competitive edge. It has continuing training implications for all employees who come into contact with customers - be it by telephone, deliveries, at reception or while processing orders.

Companies who are using their level of customer service to gain competitive advantage often set up special programmes. These may cover areas such as customer-satisfaction tracking, relationship management, Just-In-Time deliveries and real-time communications with customers. Many employees will not have experience of these unless they have worked in a similar environment elsewhere. Even those who have gained experience elsewhere will need training as each company needs to tailor their customer service to meet their own particular circumstances. Training needs to cover both the concepts of customer service and the mechanics of the various programmes. It also needs to be provided on an ongoing basis if customer service is going to be the top priority of the company.

The Belgian report pointed out that Eastern Bloc countries clearly have a cost advantage over Western European countries. This is leading to the need for the

Western countries to compete on the basis of service quality rather than price. Training therefore has a role to play if employees are to broaden and upgrade their skills and learn to communicate effectively with customers.

- **Changing Role of the Driver**

  The core functions of the driver's job still include the transport of goods from place of origin to destination, loading and unloading, knowledge of transported goods and rules for transportation, the planning and execution of the driver's task is changing. However, the driver's understanding and usage of information technology in the future is essential. Information technology helps the driver to avoid traffic jams, to survey the technical condition of the vehicle, to input order form and delivery data for real time information, etc. The driver is also increasingly seen as an ambassador for the company and the customer service training as mentioned above is particularly relevant to him.

- **Increasing Competition and The Single European Market**

  In countries where the workforce is shrinking or is expected to do so in the future and where greater competition is forecast - especially in relation to Europe - there will be important training considerations. For example, the UK sectoral report states that the *"implications for this are that the remaining workforce will need to be more highly trained in order to be able to respond to competition and to take the initiative in seeking out new markets, especially in Europe if this highlights the need for the "Euroqualification"."*

  The Single Market will require drivers to express themselves in several languages, to be knowledgeable about traffic regulations and customs formalities in various countries - despite the move towards increasing uniformity with European Union. The harmonisation of regulations and conditions within the road transport sector in Europe will require standard training packages for future operators within the road transport sector.

  The elimination of fixed prices as a result of the harmonisation of the Single European Market has also created new demands on planning clerks. Training would clearly help to make the more complicated pricing systems easier to manage.

- **Lack of a Training Culture**

  In the Netherlands surveys have shown that over a third of drivers in haulage state that they require more training. Interestingly, over four fifths of the haulage companies themselves believe that their staff have received sufficient (re)training to comply with the current functional requirements. The main reason for this is given as the lack of a training culture within many companies - especially the smaller ones.

While there is a plentiful supply of training courses in the Netherlands to meet the needs of the sector, there is still a gap between the availability and the uptake of these courses by companies. The sectoral report indicates that the poor training culture means that companies rarely undertake a formal assessment of their internal training needs and rarely are training plans developed to fit in with the companies' strategic plans.

The report points to the rapidly changing nature of the road transport sector which is increasing the need for training of employees. These changes include:

- internationalisation of activities,
- increasing importance of customer care,
- intensifying quality demands from customers,
- extension of the range of services,
- increased use of computers and software and
- increased relevancy of the knowledge of environmental stipulations.

The French sectoral report identified a particular need for the training of the small and medium size transport companies: management requires skills in general management and company development. Office employees, technicians and supervisors are also in need of training and, ideally, their training should be developed in conjunction with the development of company strategies.

Small companies in particular appear to have relied very much on on-the-job training. This is no longer sufficient and more proactive development of training programmes or planned attendance at training courses needs to be undertaken in order to keep up with the changes that are occurring in the road transport sector.

Training Requirements in Underdeveloped Road Transport Sectors

In countries such as Greece and Italy where the road transport sector is disorganised and underdeveloped there are more basic training needs which have been identified. For example, until recently in Greece there was no training system to satisfy the skill needs of the road transport sector. This is most likely because the sector is relatively underdeveloped and it carries serious implications for the training of trainers in order to disseminate knowledge. As a consequence, the Greek sectoral report identifies a long list of training needs which is basically the sum of all of the training needs of the other countries involved in this report and more besides. The list of broad areas where training is needed includes the following: Technological Change, Telecommunications, Telematics, Computerisation, Automation, Logistical and Information Management.

As the Greek road haulage sector is so underdeveloped it is even suggested that there may be a need to de-skill the existing labour force before introducing them to the new processes and systems which would help them to approach the standards of the more developed countries. In addition it suggested that CVT should be structured around the transport activities which occur in a company, rather than around the various professions (e.g. engineers, drivers, communication and marketing professions).

Likewise, the weakness of Italy's road transport in comparison to the rest of Europe indicates the great need for training in that country if its road transport sector is to become competitive again. The entire sector in Italy appears to require a radical re-organisation. Up to now it has been characterised by small companies whose drivers perform the basic function of transporting goods (90% of firms are one-man companies). The sector is expected to wake up soon to the changing nature of the transport market. In particular it is expected to start introducing skilled professionals for more specialised jobs and to try to meet the increasing demands of the customer. It is acknowledged that Italian companies will have to employ greater linguistic and commercial know-how - with obvious implications for training of a highly unskilled labour force. Companies will have to grow or band together in order to achieve increased market share and to benefit from economies of scale.

1 Contractual Policies Concerning Continued Vocational Training in the European Community Member States, FORCE 1994

5 - EXEMPLARY CVT CASE STUDIES

Analysis of the case studies in this FORCE project has presented many interesting facets of CVT in the road transport sector. These have been identified as exemplars for companies and countries interested in developing their own CVT. This section of the report outlines the characteristics which are common to many of the exemplars and subsequently describes companies displaying innovative or key exemplar characteristics. A profile of the ideal CVT company therefore emerges from the case studies which have been selected. Readers may be interested in specific characteristics and should refer to the individual case study reports for further information and additionally to the relevant sectoral report if necessary. Figure 5.2 at the end of this section provides a matrix which identifies interesting exemplar cases against the key characteristics which they display.

5.1 CHARACTERISTICS OF EXEMPLAR CVT CASES

Figure 5.1 below provides a summary of the characteristics of companies who appear to have innovative and successful CVT.

Figure 5.1

Characteristics of Innovative & Successful CVT in Companies

⇒ *Assessment of training needs*

⇒ *CVT based on corporate objectives*

⇒ *Innovative methods of delivering training*

⇒ *Highly developed CVT delivery*

⇒ *Close links with training bodies, industry groups & equipment manufacturers*

⇒ *Co-Operation between smaller companies*

⇒ *Highly focused CVT; identified target groups*

⇒ *CVT customised to suit transport/product type*

⇒ *Initial and continuous training linked together*

⇒ *Commitment to service quality included in training*

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Assessment of training needs & CVT based on corporate objectives

Relatively few of the companies surveyed had formal procedures for assessment of training needs. The smaller companies felt that they knew their staff well enough to make informal assessments. The larger companies were the ones who tended to have regular and formal assessments - ranging from meetings with staff to obtain information from the bottom up, to identification of needs as matched against annual targets and objectives.

The latter tended to be undertaken by exemplar companies and training policy was consequently linked to high level objectives and company strategy. Training needs are assessed on the basis of whether the targets and strategies could be realised with existing staff capabilities. This also means that training effectiveness can be analysed on the basis of whether targets are achieved. For example, some of the exemplar case studies illustrated a reduction in traffic accidents (and significant costs) which could be clearly linked to training of staff in preventive driving techniques.

One company (trans-o-flex in Germany) undertook a series of staff group discussions whereby staff decided what sort of skills they needed to have for their jobs. However, the central works council considers that it did not lead to any significant change in CVT content or in participant groups. Other companies hold regular staff meetings and finds that skill deficiencies are often identified at these even though it is by no means the purpose of the staff meeting to assess training needs. Similarly, many companies use their annual staff reviews to identify skill needs. The Lane Group in the UK has annual assessments and also assesses skill needs when a new contract is won. Each employee is given Key Performance Indicators which are then analysed in open discussion and reveal where areas of training are required. In the UK the Investors in People scheme, which is profiled in the UK sectoral report has led to a greater focus on individual employee needs.

Whatever the actual method of needs assessment undertaken, it becomes clear from reading the case study reports that CVT is more successful if:

- training plans are developed on the basis of corporate objectives,
- a member of the Board of Directors or first line manager is appointed to ensure training is carried out.

These two conditions mean that needs assessment will be guided by company objectives and consequently cost-benefit analyses will be facilitated afterwards. Greater staff enthusiasm for training will result when the goal is clear and the results can show that the goal has been achieved with the help of CVT.

Case Example: Assessment of Training Needs - Trans-o-Flex AG (Germany)

Trans-o-Flex has attempted to evaluate the training needs of its employees by targeting the functional groups: An overview of a 'sample branch office' was constructed to ensure that all of functional groups would be considered when evaluating the need. The actual need was then evaluated with the direct participation of the employees - one employee from every functional group participated in a workshop for the evaluation of the need for CVT. On the whole there were 37 workshops held for functional groups and others for departmental managers. Workshops considered Critical Success Factors (CSFs) for the sector and also Personnel Related Factors i.e. those skills which were needed to manage the CSFs. These were then mapped against the capabilities of each departments so that weak points were revealed. 'Success Oriented CVT' programmes have accordingly been developed under the headings of short term/long term needs, group/individual training, in-house/external training.

The French case studies also show a considerable attention to the assessment of the training needs so that they can design relevant training plans or select relevant courses.

Case Examples: Assessment of Training Needs - SAEM T2C, SETRAP, Brink's and STBC (France)

SAEM T2C: each year T2C prepares a training plan for the entire staff. It is an "open" plan which takes into account personnel's wishes as well as company requirements. Each head of department or workshop has to collect employee's requests and to make suggestions that combine staff's expectations and the company's actual needs. Proposals are summarised by a management committee and submitted for approval to employees' representatives.

SETRAP: the vocational training policy of SETRAP is aimed clearly at two distinct target groups i.e. non-moving staff and moving staff. Trainees are asked to state their needs and to express the difficulties they come across in their working life. On the basis of this informal consultation system the management decides who will attend a proficiency course. Moving staff are required to attend three different courses at least in the areas of safety, languages and mechanics. The non-moving staff are not automatically offered training but a selection of them have undergone training suitable to their own situations.

Brink's: the analysis of this company's training needs rests on a definition of job targets and incorporates forecasts for future job development. There are specific training schemes that correspond to each position and type of work, which is defined in terms of widening, increasing or changing skill requirements.

STBC: while STBC does not have any formal training plan it does have meetings at which general management and employees agree upon training courses. Training subjects are selected depending upon current company requirements. In addition, non-moving employees are separately identified but are required to attend driver's training as it gives them a greater understanding of the company's operations and provides for better internal relations.

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Innovative methods of delivering training

One of the main purposes of this FORCE survey was to identify innovative forms of CVT. This has been a relatively easy task as many of those who have developed or adopted innovative CVT have enthusiastically described them in the case study reports.

Before describing some of the methods used it is interesting to note the typical size of exemplar companies who presented innovative techniques. Many of these companies were relatively large in size. The larger companies can afford to experiment with training techniques and can work with training bodies to pioneer new training methods. Often they work on developing training to suit their particular type of transport or goods carried and in doing so develop a new technique which could be easily transferred to other companies. The smaller companies are not excluded from innovative CVT but often cannot spare the time for experimenting with training techniques. In addition, they tend not to utilise high tech training or any expensive methods as they have only a small base across which to spread their costs. This is where the training bodies, industry groups and equipment manufacturers have a role in helping the small companies to develop. Many small companies utilise these entities to stay close to developments in training and to ease the cost of equipment and trainers. In Portugal for example Transportes Amaral & Frias avails of training through one its largest customers (Shell) and through equipment suppliers.

The typical exemplar company has moved from just training staff in-house with lectures, handouts and slides to training in modules which are designed where possible to be delivered while the driver is on the move, resting or at home. New methods are developed with a view to increasing both the efficiency and effectiveness of the training. Distance learning now means that not all trainees have to travel to a central point to receive CVT. Interactive videos and CD-ROM programmes, books and audio cassettes are utilised by the exemplar companies. One company brings staff together for training but utilises role playing rather than the traditional lecture based approach. Many of the companies who found their CVT successful trained their own trainers and then let each trainer spend at least a day with individual employees so that skill deficiencies could be addressed and various needs discussed with the employee at the same time. In this way the training was very closely linked to the realities of the employee's worklife.

The UK case, A Passenger Transport Group, was able to point to the effectiveness of a multi-media approach to training:

> *"Originally it was postulated that each hour of competency based training and interactive video programme material was equivalent to four hours of traditional class contact. Evaluation of the programmes shows this early estimate to be low and that the equivalent rate is closer to seven to one. In other words, evaluation of the practical results of a multimedia programme suggests that a whole days traditional training can be achieved and knowledge and skill retained at an equivalent or higher level in just one hour."*

The company points to the high costs of the development and operation of a multi-media approach but highlights that units costs of delivery are significantly lowered - In this case the company can spread the annual Stg£2.4 million cost over its 6,000 employees (this includes development as well as delivery costs). Smaller companies would certainly need to access the multi-media tools though a training body or industry group.

The exemplar companies which have been identified in terms of innovative training are listed in the case examples below against their particular type of innovative equipment or technique.

Case Examples: Companies using innovative training techniques

Passenger Transport Group (UK): Provides an interesting example of the use of multi-media. Programme material is held on CD-ROM and uses touch screen to avoid any keyboard related problems. Audio instructions are available in four languages. Interactive video, case studies, workbooks and on-the-job exercises are also used.

SAEM T2C and GT Location (FRANCE): Both of these companies use role-playing to teach communication techniques to drivers who may be faced with difficult situations. Video cameras are also utilised to help with group discussions.

Transport Development Group (UK): Uses a non-traditional approach to training based on group discussions rather than a teaching situation to reflect the fact that participants are experienced drivers. The emphasis of the course is on sharing experience and knowledge.

Royal Mail 'Maildrive' (UK): This CVT programme consists of 25 different modules which are capable of being delivered in any order and at the pace of the company or unit concerned. Materials used include tutor notes and OHP packs, videos and both classroom and practical work exercises. Specific modules are selected to match the particular needs of the group being trained. The module concept allows for new subject areas to be added at any time.

Highly developed CVT delivery

Some companies presented CVT whereby the participants learnt new techniques such as data processing, computerised logistics procedures or driving skills, all of which could be considered as the actual tools that are required to operate the company. Others presented CVT which focused on employees having a customer oriented approach, on instilling a certain corporate culture or perhaps on quality of service. Such training themes could be considered to focus on the employee's understanding and attitude which is required to make the operations of the company flow smoothly and successfully. In the exemplar companies it has been noticed that a combination of both types of training is undertaken. It tends to be larger companies which will undertake both. Small companies typically state that they can only afford to do one type or the other and often say that the software training can be done informally because there are only a few staff.

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Case Example: Highly developed CVT delivery - Kuhne & Nagel (Germany)

This case illustrates how training can be developed to incorporate both the practical tools required for everyday work and the approach and attitudes of employees which affects the long term operations and customer relations of the company. The case study report presents a set of Human Resource Development Seminars which covers eight years of training. The aim is:

> *"to improve participants' social skills (communicative ability, flexibility and sympathetic understanding) and methodological skills (work organisation, delegation and time management)....Parallel to these seminars is a central on-the-job CVT programme comprising all functional fields - marketing and sales, EDP, financial management and control."*

Close links with training bodies, industry groups and equipment manufacturers

Exemplar companies have tended to maintain close links with training bodies, industry groups and equipment manufacturers. This has facilitated:

- savings on development costs,
- training of trainers so that new training techniques could be disseminated quickly
- sharing of ideas to achieve common goals such as the reduction of accidents
- small companies to avail of training which they could not afford to undertake alone
- companies to stay at the cutting edge of road transport developments on a national and international basis
- the development of agreed industry standards.

A prime exemplar for achieving successful CVT through maintaining close relations with training organisations is Transportes Rodoviarios de Mercadorias Luis Simoes in Portugal. This company is closely aligned with the Institute of Transport, the National Association of Professionals of Road Transport of Goods, European Co-Operation programmes, the universities and vocational schools. It states that this leads to more meaningful training being provided and that the Company can influence the training courses being offered to students in the universities, colleges and industry training schools. The Company likes to identify external experts in the road transport sector who can share their expertise with selected personnel who in turn will train the rest of the firm.

Some of the smaller companies who would otherwise not have had formal training programmes have linked up with customers and equipment suppliers. Examples include: Transports Baonville in Belgium which undertakes training courses through the UPTR (Road Transport Professional Union) and has a training contract with its vehicle supplier; Eschilos of Greece which trains its drivers through courses organised and paid

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for by its key customer (Shell); Adams Transport in Denmark which has both internal and external training courses, including participation by the Company in a training development project which has been initiated by private and public training institutions and consultants and private companies from three industries. The aim of the latter course is to design public training courses to match the present and future needs of private companies and also to enable a systematic evaluation of training effectiveness.

The Dutch case studies all show close co-operation with training bodies and industry groups and the sectoral report illustrates clearly how such close bonds are developed with the companies. The country has a tradition of utilising training levies and also of involving employers and training institutes from an early stage through an apprentice training scheme.

Case Example: Close links with training bodies - A Producer of daily-fresh products (The Netherlands)

This case illustrates how almost all of its training is derived from programmes developed by training institutes. The company was involved in many courses throughout 1993, including: Commercial Skills, General Management, Dutch for Foreigners. Each of these three courses were provided either through private training agencies or through the sectoral training institute.

Another course, Customer-minded behaviour, has been bought from the Schooling and Training Department of the EVO Entrepreneurs' Association for Logistics and Transport. The EVO is an interest organisation for production companies who either undertake their own supply and distribution activities or farm it out to third parties. The focus is therefore on business companies as users of the services of the professional transporters, logistics specialists, or their own means of transport. This company is a member of the EVO and makes use of many EVO courses.

The Schooling and Training Department of the EVO runs about 50 courses. The training in customer-minded behaviour is one of many modules provided by the Department. The company can choose one or several modules from the programme. Each module has a basic structure but can be tailored to suit the needs of the particular company.

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Co-Operation between smaller companies

The smaller road transport companies can often not afford to invest large sums in continued training of staff. They do not have the funds required or enough staff to justify the unit cost of training. This lack of resources is often cited as a major barrier to their getting involved in CVT at all. However, some of the case studies in this survey had been very successful in getting around this problem by co-operating with other small companies which whom they were not directly competing. Two Dutch cases in particular had grouped together staff from other companies - in many cases the cost is shared by the companies involved although sometimes the lead company is prepared to subsidise other companies' staff if it clear that it will directly benefit them.

Case example: Co-Operation between smaller companies

A Producer of Daily Fresh Produce: this company has its own transport department. It is now providing training not only for its own drivers but also for the drivers of other companies who are involved in the supply and dispatch of its products. Supply companies who want to continue supplying their services to the company in the long run are obliged to share in the training.

A Large Private Passenger Company: this company also trains temporary drivers. This is significant as it is involved with ten other firms from all over the country from which it recruits temporary drivers in peak periods. The company sets great store by providing a constantly Whig quality of service. The customer must not be aware of the difference between a company driver and a temporary driver.

Highly focused CVT; designated target groups

As already mentioned, the exemplar companies tend to have well developed CVT courses, covering training in both practical day-to-day skills and longer term focused training on corporate culture and employee attitudes. Such training therefore is likely to be designed for specific target groups in the company - typical groupings are drivers, warehouse staff, admin staff, logistics staff, junior management and senior management. The larger companies have developed training courses and materials in various languages. The case study on a Passenger Transport Group in the UK is a prime example of this with audio training material which is available in four languages (English, Bengali, Punjabi and Hindi) - reflecting the multi-racial background of its drivers.

Almost all companies have some form of training for their drivers. The exemplars have CVT for segmented employee groups and have designed or adapted the training programmes especially for the individual groups. The matrix at the end of this section lists the main exemplar companies who have designated target groups for training.

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Case Example: Highly focused CVT - A medium size removal company (The Netherlands)

The case study report for A medium size removal company also mentions a Dutch course in Logistics which has been designed especially for women and is provided by the Stichting Vakopleiding Wegvervoer or SVW (Vocational training in Haulage) - the national agency for apprenticeships.

As the majority of logistics planners are ex-drivers there are very few ethnic minorities or females employed in that role. Consequently efforts are being made through this course to attract individuals from these groups to the occupation and to reduce the recruitment dependence on ex-drivers. The women's course was initiated after the FNV trade union, the Women's Vocational Training School and the SVW got together to discuss the idea.

The target group consisted of nine women re-entering the workforce and nine women already employed in a transport occupation. In 1993, the regular training programme was adapted to suit the needs of the particular target group by expanding the areas dealing with technology and business management, social management & marketing. These have been expanded because the Women's Vocational Schools have asked that the training should not be only occupation-oriented but should also allow for advancement into higher management functions.

CVT customised to suit transport type

Some of the exemplar companies operate in a specialised area of transport, such as transport of fresh foods, hazardous goods, valuable items or express parcels. They have therefore had to focus their training on the use of specialised equipment (for example vehicles carrying fuel or refrigerated foods) or on satisfying special customer needs (such as 24 hour delivery, extra care with breakables or handling of dangerous goods).

By paying attention to the specialised niche within which they operate these companies tend to have carefully developed CVT. A list of the exemplar companies which have customised their CVT to suit their type of transport operation is presented in the matrix at the end of this section.

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Case Example: CVT customised to suit transport type - Adams Transport (Denmark)

Adams Transport is the largest furniture remover and storage company in Denmark. It also specialises in removing high value goods such as antiquities and art collections for exhibitions.

About five yeas ago Adams started to develop internal training courses as they felt that they needed more company-specific training which was not provided by the labour market courses in the AMU-system.

Adams developed its own 'Packing Master Course' in which the employees are trained to pack boxes, containers and trucks in an efficient and secure way. They are also trained to manage a total removal contract. In addition, participants are trained to design and tailor-make packings for high value and fragile goods.

Much of this training is carried out through following experienced employees on the job. The aim of the company is that every operational employee by mid-1995 will have been trained as 'Packing Masters'.

Initial and continuous training linked together

Exemplar companies tend to take a long term view when planning training activities. They also tend to segment employees into groups which require particular types of training. New employees are often identified as a separate group who require some form of initial training before they actually start working in the new job. This initial training then sets the employee up for attending continuous training programmes which they may want or be required to attend over the course of their employment.

One company, the Lane Group in the UK, operates a system whereby new recruits are 'buddied' with a colleague from the same department who will show them the ropes for the first three months. This is followed by a formal induction which involves meeting everyone in the company, getting an introduction to the Company values and to its vision for the year 2000.

SAEM T2C in France also has a training plan which covers 'Familiarisation Training' for newly hired drivers and 'Continued Training' which is offered to all personnel. Likewise in Belgium Corneel Geerts requires every new employee to attend an 'Introduction to ISO standards' training course and then all employees attend small group training sessions which are held on a monthly basis within the company. Other companies who clearly focus on initial training as well as continuous training are listed in the matrix at the end of this section.

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By providing initial training programmes especially for new recruits these companies are ensuring that their employees are quickly assimilated into the corporate culture. Some companies do not provide such courses - However they would be so closely allied to the local college or vocational school from

where they get their recruits that they are effectively influencing the initial training system anyway. However, having a training plan which includes initial training as part of the process indicates that a company has a long term commitment.

A Commitment to service quality

Almost all of the exemplar companies exhibited a commitment to service quality. In many cases this meant that they were involved in ISO 9000. Sometimes they aimed to be 'customer oriented' companies so that service quality would be an integral part of their operations. In fact one or two companies decided not to proceed with ISO 9000 as they found it cumbersome or ineffective - but they did replace it with their own approach to quality. Either way the most progressive companies focused on quality in some way and integrated it into their training programmes as separate modules and/or as a constant theme in all training modules.

5.2 EXEMPLAR CASE STUDIES IDENTIFIED

The matrix below identifies companies which exhibit particularly strongly one or more of the characteristics discussed in this chapter. For example, readers wishing to see examples of companies who have formal procedures for assessment of training needs should read the case study reports for Edgar Grass, DHL and the Lane Group. Likewise segmentation of employee groups in particularly evident in SAEM T2C, TDG, the Lane Group and Luis Simoes. It should be noted that these companies have been chosen as exemplars for certain characteristics. There may be other companies who have these characteristics but not to the same extent. Some of the companies listed here have several of the characteristics and it is therefore probably worth reading their full case study reports.

Figure 5.2: Case Studies Exhibiting Exemplary CVT Characteristics

Size of Company (# of employees)	***Exemplar Characteristic → Case Study ↓***	***Needs Assessment***	***Based on Corporate Objectives***	***Innovative Techniques***	***Focused (identified target groups)***	***Highly Developed CVT delivery***	***Close links with training bodies, Industry Groups & Manufacturers***	***Co-Operation between small co's***	***Custom-ised CVT***	***Initial & Continuous CVT***	***Focus on Quality***
	Germany										
3,441	Kuhne & Nagel		x		x	X				x	
55	Edgar Grass	X	x								
1,500 Germ	DHL	X	x						X		
2,500	trans-o-flex		x						X		
N/A	WBO			x							
	France										
442	SAEM T2C			X	x	X				X	
35	Setrap			X					X		
731	GT Location					X				X	
8,653	TFE										
8	Comap			X		X				X	
5,700	Brinks									X	
	UK										
8,500	TDG			X	X						
160,000	Royal Mail		X	X							
6,000	Passenger Transport Group		X	X							
323	Lane Group	X	X	X	X					X	
101	Langdons										
5,000	Du Pont										
49	Lucketts										
	Portugal										
315	Luis Simoes	x			x		X			x	

Size of Company (# of employees)	***Exemplar Characteristic → Case Study ↓***	***Needs Assessment***	***Based on Corporate Objectives***	***Innovative Techniques***	***Focused (identified target groups)***	***Highly Developed CVT delivery***	***Close links with training bodies, Industry Groups & Manufacturers***	***Co-Operation between small co's***	***Custom-ised CVT***	***Initial & Continuous CVT***	***Focus on Quality***
	Denmark										
120	Adams Transport								x		
	Netherlands										
n/a (own account)	Daily Fresh Products						x	x	X		
25	Medium Size Removal Co.				x		x				
n/a (labour pool)	GPdW (NL)				x		x				
250	A Large Private Passenger Co.	x					x	x			
	Ireland										
425	Irish Express Cargo				x	x	x				x
230 including subcontractors	Bell Lines					x					

6 - CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

The findings of this survey of CVT in the road transport sector can be grouped together in terms of their relevance for: small road transport companies, large road transport companies, transport customers and training bodies/social partners. This section brings together all of the information contained in the report to make summary conclusions and consequent recommendations and ideas for those involved in the sector.

Sections 2 to 4 have analysed the operating and employment environment of road transport companies and the business strategies which they are adopting. Section 4 in particular presented current training practices in the sector and pinpointed some future training requirements that companies will have to prepare.

What is clear from these sections is that CVT is of great importance to the sector and that it is growing in importance. The contributory factors include:

> **A high industry growth rate** which means that there is a constant stream of new recruits which need to be trained. Moreover, the traditional target recruitment group (i.e. young males) is decreasing and different population segments will have to be identified e.g. women and older men. This has implications for CVT as women are less accustomed to driving and goods loading and often have different lifestyle needs - they may need to be trained for certain jobs which suit their needs e.g. logistics and planning.
>
> **Changes in the industry**, such as internationalisation and deregulation, quality assurance programs, technology development, environmental concerns and safety regulations. All of these are putting pressure on employees to upgrade their skills to meet new expectations.
>
> **Changes in working conditions**, such as the ageing of the workforce and moves to reduce costs from sick leave and accidents. Older employees tend to have more trouble with backache and fatigue and CVT can help them to alleviate and prevent this. Likewise accident prevention schemes require training for employees (such as in the Maildrive programme for Royal Mail in the UK).

Increasingly well-defined occupational segments in the industry, which means that training must be relevant to the target group. Clearly drivers account for the largest employee occupation and therefore must have well developed training programs. For all occupational categories the skills required are becoming more complicated and are constantly changing due to technological and regulatory change.

Despite these factors pointing to the need for training, research has shown that current investment levels in CVT are still relatively low. A study in the Netherlands indicated that the percentage of staff enrolling in an internal or external training course within the road haulage sector in 1993 was 24% , as compared to 37% within all sectors. However, the 24% did represent an increase from 12% in 1986 and 18% in 1990[1]. Noticeably, the participation rate varies strongly between small (less than 5 licences) and large companies (i.e more than 20 licences) with the rates being 15% and 27% respectively[2]. In France 2.7% of the payroll in professional road haulage is spent on training, which is less than the national average (3.2%). This proportion is much higher for other modes in France (eg. rail of 8.2%). In countries with a less developed training infrastructure in the road transport sector compared to other sectors could even be larger.

6.1 SUMMARY CONCLUSIONS ON CVT IN SMALL ROAD TRANSPORT COMPANIES

CVT in small companies tends not to be sophisticated or innovative for various reasons. Firstly, funds are limited and human resources to focus on training schedules and programmes are scarce. There is a common situation where "all hands are on deck" and continuous training is given a relatively low priority by management.

It is genuinely difficult to release the small number of employees for training, even on a rota system. The profitability margin in a small company tends to be very tight and companies are not convinced anyway that the benefits of training are greater than the costs. Information to refute or back-up their doubts is not available, although this particular survey presents some cases which illustrate significant benefits from CVT.

Many small companies consider that the one-to-one, informal, on-the-job type of training which they undertake is very effective in a small company. They would therefore not see the need for formal CVT planning and analysis.

In general, CVT in small road transport companies is reactive. It is carried out on an ad-hoc basis - as a result of legal or safety requirements or because of pressure from customers. Often, the CVT gets implemented because of the goodwill of managers and employees rather than as a result of more proactive strategy development. Some initial training is given but that is often the full extent of any training given to an employee during his time with a small company.

CVT programmes have been made possible for some companies through co-operation with other small companies, training bodies including trade unions, industry groupings, manufacturers or customers.

Many of the problems faced by small companies wishing to develop continuous training can be alleviated if certain steps are taken. They could short-cut the learning process, the expense of experimentation with CVT and could also reduce the time pressures of training by:

- Copying the methods used by the larger companies. This report for example illustrates different types of training which have been found to be effective. Sometimes, large companies are willing to include employees of (subcontracted) smaller road transport companies into their courses.

- Keeping in close communication with the industry groupings, training bodies, manufacturers and large customers. These key players can help to provide information, equipment, expertise and funds to name but a few potential contributions. The latter two groups can help the company to learn new techniques and will often provide and pay for training if they require certain a standard or type of service.

- Sharing the cost of expensive material with other companies and encouraging training organisations to purchase the latest equipment. This means that the company can have access to expertise and equipment which would otherwise be outside of its league.

- Utilising distance learning material which drivers could access while working or at home

6.2 SUMMARY CONCLUSIONS ON CVT IN LARGE ROAD TRANSPORT COMPANIES

Typically, CVT in larger companies tends to be well developed, more innovative and more effective because they are forced to design formal training plans to ensure that the large numbers of employees can deliver a service to a set standard. They also have specific personnel whose sole or major responsibility is to develop training plans and manage their implementation

Larger road transport companies tend to be proactive in the development of CVT and design plans based on corporate objectives. Training is customised to the individual needs of employee segment groups. In this way, CVT is planned with a view to achieving certain goals and it can therefore be evaluated at a later stage. A strong focus on evaluation is not a very typical characteristic although the case studies of the more progressive companies in this survey did discuss the issue.

Larger companies have more funds to invest in training and more time to experiment with techniques. They also have more time for evaluation and for adjusting training practices accordingly over the long term.

6.3 SUMMARY CONCLUSIONS FOR OTHER PARTICIPANTS IN CVT

Customers

The customers of transport companies have a strong influence over the types and level of CVT undertaken. One of the most common influences has been the adoption of ISO 9000 and quality training programmes because it is demanded by many customers. Safety training is also introduced in companies serving certain types of customers, such as oil or chemical companies. For example, two case studies in this survey highlight Shell as a key training provider for its road transport suppliers.

Those companies which maintain a close relationship with their customers tend to keep abreast of developing requirements. They also develop a situation whereby they are an essential part of the customer's operations. The customer then becomes dependent upon them and is reluctant to jeopardise its operations by switching to a competitor company.

Thus it is equally important for customers and transporters to stay close. The former receives a customised and high standard of service and the latter ensures long term business.

Training Bodies and Social Partners

It is evident from the survey that training bodies and social partners are able to influence CVT development. By working together with road transport companies and experimenting with various different types of training formats they have helped to develop comprehensive CVT programmes.

Training bodies are often subsidised by the transport companies. They therefore have to develop courses which meet the training needs of employees as the support may be withdrawn otherwise. The social partners often operate as channels through which training needs are communicated. They also provide courses themselves and provide feedback on CVT courses.

Training bodies and social partners can benefit from close relationships with larger road transport companies as the companies can help to try out new training ideas and often provide interesting ideas in return. In addition to this the training bodies or social partners can keep abreast of the forces of change in the sector by linking together with transport customers and asking for their input.

Two countries in particular illustrate how the social partners can contribute to the development of continuous vocational training - Portugal and France. In Portugal the social partners, by law, have a key role in the co-ordination and management of the certification system. They also assist in the definition and evaluation of the vocational policy and they work to promote the development of both initial and continued training. Employers and employees associations signed the Policy Agreement on Vocational Training in 1991. Similarly, in France there is a National Joint Committee whereby vocational training policy for the road transport sector is jointly decided and negotiated by employers and employees unions. From 1995 onwards training will be financed from a pool of resources collected by the officially approved joint co-operative bodies (OPCA) for the transport industry which deals with funds contributed by companies with less than 10 employees.

The social partners are also actively involved in certain other countries (including The Netherlands) and it is recommended that all national sectoral reports are reviewed to see exactly how co-operation between the training bodies and social partners can improve the content and effectiveness of training in the road transport sector. Some countries also collect training levies from road transport operators so that this co-operation can be proactively developed. Levies are also utilised in an effort to ensure that some companies do not poach trained employees from other companies without contributing any funding.

6.4 RECOMMENDATIONS FOR CVT IN THE ROAD TRANSPORT SECTOR

This section makes recommendations for any company which wishes to set up or develop their own CVT programs so that their business can be more effective and more profitable. These recommendations are drawn from the case studies, the sector analysis and the examination of the business strategies and forces of change as discussed in Section 2.

The recommendations are identified below and summarised on the flowchart in Figure 6.1.

Recommendations:

Design CVT plans against strategic objectives and related goals/targets - so that guidelines can be set for choice of CVT themes and programmes through the year/planning period.

Match existing employees skills against the goals and targets - so that skill requirements can be identified and the most relevant skill deficiencies can be addressed.

Allocate responsibility for training at a high level in the organisation so that staff are aware of the importance of and commitment to CVT. High level employees are more aware of the corporate objectives and have the power to implement new CVT programmes or to change existing ones.

Select CVT themes and purchase or design CVT programmes. The 'purchase or design' choice will depend on the level of sophistication of your own training facilities. Be sure to **set targets** for the expected results of training. Targets could include, for example, reduction in road accidents by x%, reduction in late goods deliveries by x%, 100% utilisation of a new computer system with zero errors, x number of drivers reaching a certain level of fluency in a chosen language.

Investigate distance learning programmes. This allows drivers to learn without significantly disrupting their schedules. Videos, audio tapes and workbooks are typical tools that are used. Distance learning can be supplemented by conclusion or introduction seminars if necessary. 'Help desks' are often required.

Investigate innovative materials and training techniques. These may be suitable for the topic that you want to address. For example, simulator driving machines, interactive videos, role play, case studies and group discussions may be more effective in certain situations.

Be aware of the capabilities of external training organisations and experts - so that unnecessary costs in training development or delivery are avoided. It may be that a training group has developed a programme which is tailored to the needs of road transport companies and that it has already found useful ways of delivering the content with minimal disruption to delivery schedules.

Link up with relevant training entities or other small companies if yours cannot afford to undertake training alone. There are benefits in this in that your staff get to share their knowledge and experience with other companies. You also get to share the costs and you avail of the expert knowledge of the training organisation. The larger road transport companies tend to stay in contact with training entities so that they will reap all of these benefits and smaller companies should have even more incentive because of the cost-sharing benefits.

Ensure close contact with customers so that the CVT can be continuously adapted to their needs. For example, some customers may express dissatisfaction at the manner of delivery staff/drivers and training can help to address this situation. Other customers may wish to have your drivers utilise their computerised stock control system to log deliveries and the drivers would therefore need to be trained to ensure smooth transition to the system.

Evaluate training results against the goals and targets that were originally set. Be prepared to amend CVT immediately if results are disappointing. Highlight successful results to staff if doubts are expressed about the effectiveness of the training and the effort that they have to put into it.

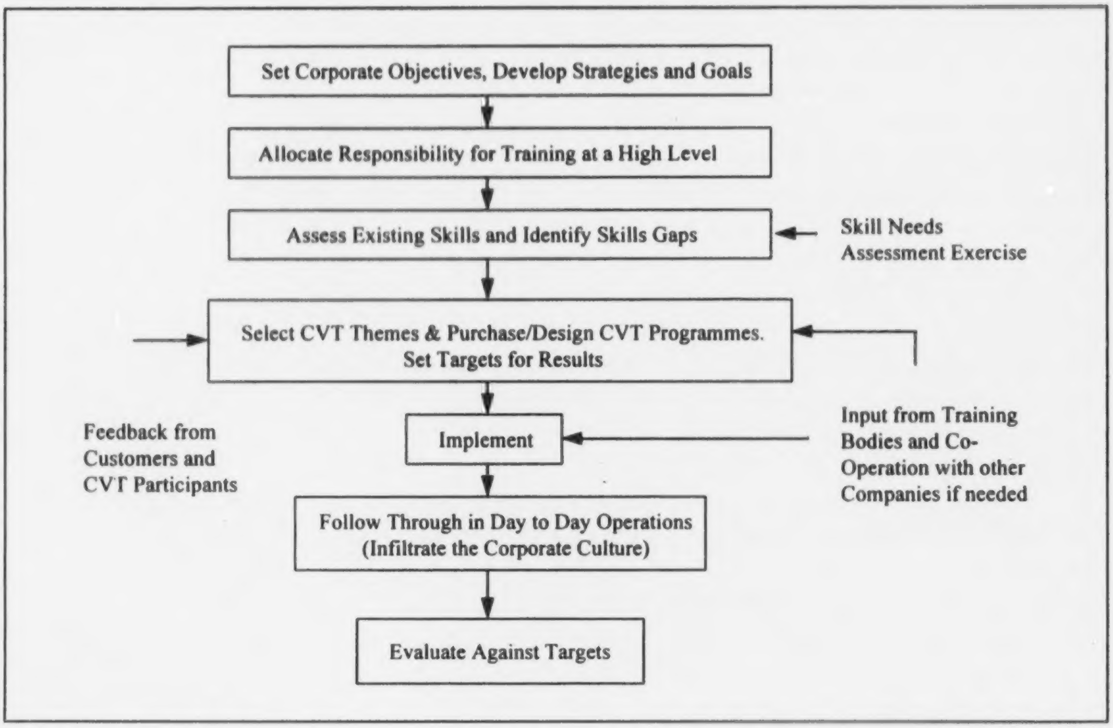
Formalise the procedures for assessment of training needs and gaining feedback from CVT participants. Use the results to amend CVT where necessary.

Infiltrate the corporate culture with themes from the training programmes so that it is a continuous process. For example, quality programmes are continued with standards being set on a regular basis; courses on satisfying the needs of the customer will be more effective if there are few barriers between the employee and the customer; CVT courses on safety are more meaningful if safety records are subsequently published on a regular basis. In addition, reward schemes can be set up after relevant CVT courses so that employees can clearly see the goals and will be more likely to draw on the lessons learnt from the course. Building relationships with the drivers in particular is important as they spend much of their working hours alone and can become isolated from the corporate culture of the company.

Training bodies should follow developments in training techniques and generate a model on which companies could base their training programs. This report is one step towards the development of such a model. Training programs should also take into consideration the business strategies and forces of change in the road transport industry. The Euroqualification discussed in Chapter 2 is an example of the social partners and training organisations taking into consideration the increasing internationalisation of the road transport sector. However more can be done.

A general recommendation is also made that **a survey of the costs and benefits of training should be undertaken**. This would hopefully provide information on cost-effective CVT. It would also help satisfy the many small companies who have doubts about the usefulness of training. Until such a survey is done this issue will represent a major stumbling block to the achievement of any significant level of continuous training within small transport companies.

Figure 6.1 A Framework for Developing CVT


Set Corporate Objectives, Develop Strategies and Goals
Allocate Responsibility for Training at a High Level
Assess Existing Skills and Identify Skills Gaps
Skill Needs Assessment Exercise
Select CVT Themes & Purchase/Design CVT Programmes. Set Targets for Results
Feedback from Customers and CVT Participants
Implement
Input from Training Bodies and Co-Operation with other Companies if needed
Follow Through in Day to Day Operations (Infiltrate the Corporate Culture)
Evaluate Against Targets

CONTINUOUS VOCATIONAL TRAINING
IN THE ROAD PASSENGER TRANSPORT SECTOR

A SURVEY OF THE FORCE PROGRAMME

EUROPEAN REPORT

JANUARY 1996

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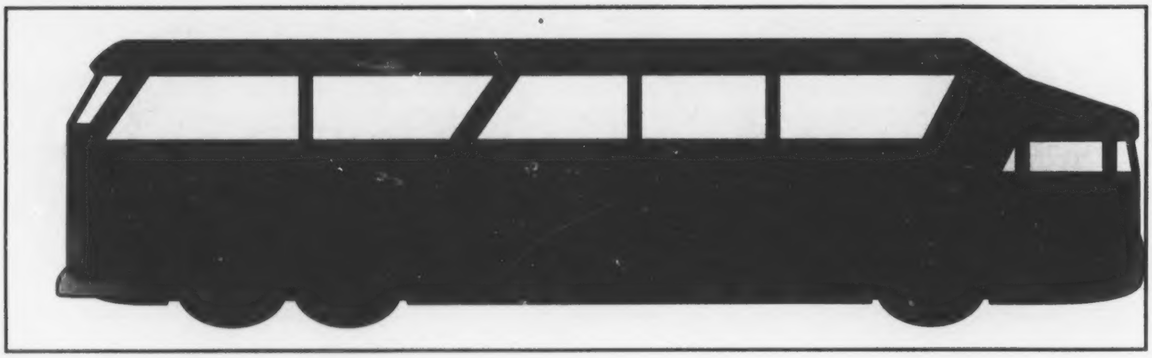

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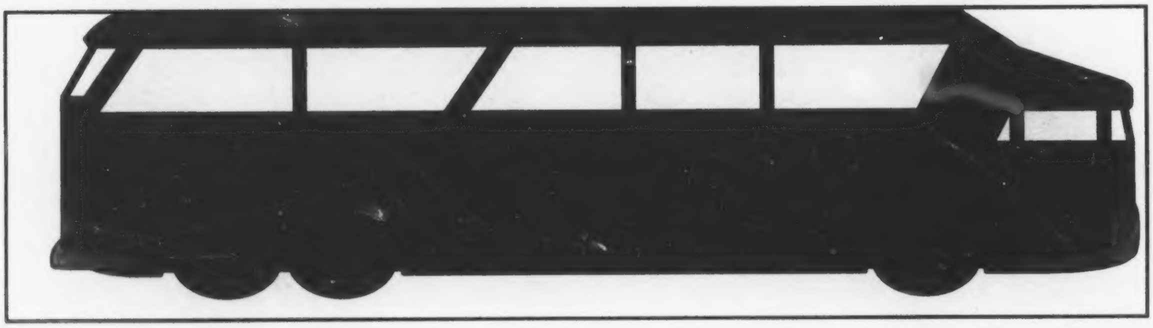

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EXECUTIVE SUMMARY

The main purpose of this report is to identify exemplary and significant practices across the twelve member states in the field of continuous vocational training in the Road Passenger Transport Sector. It is based on a major survey of both the road freight and road passenger transport sectors in each country and of a sample of companies which were identified as undertaking innovative continuous training programmes.

Two separate reports were produced as a result of this overall survey, the main report 'Continuous Vocational Training in the Road Freight Transport Sector' was based on a study of the 12 Member States and 37 road freight transport company case studies. This supporting report also utilises the national sectoral reports and the findings from eight road passenger company case studies that were undertaken.

It was intended to survey and review only the private passenger transport sector and not the public. However, two factors made this fairly difficult. Firstly, the public sector has such a dominant share of the passenger transport market that its influence on the sector cannot be ignored. Secondly, as the private passenger transport sector is so fragmented, statistics relating to only that subsector are not available or cannot be directly compared with other countries.

NATURE OF THE ROAD PASSENGER TRANSPORT SECTOR IN THE EU

Demand for private mobility is growing. However, this does not mean that bus and coach trasnport is also growing. The growth in demand for private mobility is mainly in the area of private cars.

A large proportion of coach services are closely associated with tourism. This mode of tourism transport is very popular among lower and medium income household and also amongst senior citizens. However, car ownership is also increasing in these groups. Moreover, traditional destinations like Greece or Turkey are becoming more popular and this is stimulating air traffic. Operators are beginning to try to attract other market segments by offering high quality services and new products such as shorter cultural tours or festival trips.

The stock of buses and coaches in the EU has increased at an average rate of c. 1% p.a. since 1981 and totalled c. 430,000 units in 1991. Passenger kilometres is used as a production indicator for the sector. In the Southern European countries (Portugal, Spain, Italy) the yearly growth rate was over 3% (1980 - 1992). However, in Germany, Greece and the UK, the number of passenger kilometres per year decreased by aroung 1-1.5%. The growth rates are much lower than those of the road freight sector (ton-km growth was at 3.5% p.a. or more 1989-1992). The reason for this is that long distance travel in passenger transport has favoured aeroplanes or cars over buses while road hauliers have actually benefited.

An average person in the EU travels approximately 1,000 kms per year in a bus or coach. The modal split of passenger land transport is dominated by cars (at area 80%) - a share which is increading. Rail has between 5 and 9% and buses/coaches carry 6-28%, depending on the country.

FORCES OF CHANGE

The development within the Road Passenger Transport Sector are similar to those in the road freight transport sector. The differences lie mainly in the extent to which the change is occurring and on the impact that it has on business strategies and on the type and level of CVT which is adopted by the company. Figure 1 summarises the areas where the sector is developing and forcing change within the entire road transport industry.

Figure 1: Forces of Change

Safety Issues	-	driver stress and traffic levels
	-	vehicle maintenance and features
	-	regulations for drivers and road standards
Technology Developments	-	admin & operations, IT & EDI
	-	vehicle technology
	-	road infrastructure
Customer Care & Quality	-	quality standards
	-	customer demands and customer care
	-	impact of new technologies
Legal Requirements and Changes		
Environmental Issues	-	transit traffic
	-	pollution
	-	fuel efficiency
	-	alternative transport modes

The two issues which were most often mentioned in the national sectoral reports and case study reports were customer care (& quality) and safety.

By summarising the strategies of the case studies from this survey, it was possible to get a picture of business strategies which are being adopted within the road passenger transport sector.

Figure 2: Summary of Business Strategies Adopted by Case Study Companies

SAEMT2C (France): Adopting a strategy of gaining competitive advantage through investment in advanced technology.

SETRAP (France): Following a customer focused, market oriented strategy.

KTEL of Evros (Greece): Adopting a strategy of consolidation and reorganisation.

A Large Private Passenger Company (Netherlands): Implementing a strategy of market segmentation and penetration.

KM-Reisen GmbH (Germany): Implementing quality systems and investing in training.

SADAR (Belgium): Following an expansion strategy and aiming to become more commercial in its approach to business.

A Passenger Transport Group (UK): Adopting a strategy of maintaining competitiveness through increased flexibility, increased service quality and increased efficiency.

Lucketts Travel (UK) : Implementing a strategy of winning market share by providing the highest levels of service in its market segment.

What is clear from these summaries is that most companies need to focus on providing a quality service in their chosen markets. To do this they are having to train their staff in certain areas and sometimes they are having to focus more tightly on a smaller range of market segments. The latter is often important where there is stiff competition. Some companies are content to rationalise, become more flexible and upgrade their service quality. Others want to do all of that and to expand market share by being innovative in their product range and staying at the leading edge of technological change.

Other factors influencing changes in the sector include: the Single European Market, changes in road infrastructures and traffic planning and the fact that private sector is so fragmented while the public sector is dominated by large companies who are owned and operated by local or national government.

EMPLOYMENT

Statistics on employment in road passenger transport have to be treated with care. However, the figure below gives an overview of existing statistic for total employment

In the European report on the road freight transport sector, we have seen that total employment in road freight transport has grown strongly in the past. This is not the case for the bus/coach companies. Time series are available for Portugal, Belgium, Germany, the Netherlands, France and the United Kingdom. In half of these countries (France, Germany, Netherlands) total employment has grown, while in the other half the opposite has occurred.

Figure 3: Employment In Road Passenger Transport In Some EU-Countries, 1992

	Employment in private bus transport (thousands)	*Total employment in (private+ public) bus transport (thousands)*	*Definition of total employment, year*	*Proportion of column 3 in total employment*
Belgium		21	including trams, 1992	0.56%
France		204	including trams, taxis, 1992	0.93%
Germany (incl. former GDR)	49	253	including trams, taxis, 1992	0.69%
Ireland	7			
Luxembourg	0.3	1	including trams, taxis, 1993	0.79%
Netherlands	7	33	Including trams, 1992	0.51%
Portugal		18	including trams, 1989	0.67%
United Kingdom		148	1992	0.58%

Sources: STATEC (Luxembourg), Verkehr in Zahlen (Germany), OEST-INSEE (France), CBS (Netherlands). Other countries: national reports. Eurostat (Labour force survey) for employment figures of the total economy.

Unfortunately the available statistics for the sector do not allow for calculation of productivity figures.

The occupation of driver, not surprisingly, appears to be the most important occupation of the sector (at about 50-65% of total employment). Females are a minority group and their participation varies from about 5-20% depending on the country.

The social partners play a very active part in the design and provision of training (with the possible exception of Greece). In the UK, the recently devised Scottish and National Vocational Qualification system provides an intensive example of training devised specifically for the bus and coach sector. Also, in France, Belgium and Germany, the social partners have developed collective agreements which include provisions for training.

INITIAL AND CONTINUOUS TRAINING

The UK and France provide interesting examples of well developed initial training schemes. A high standard of initial training is important as it has implications for the level and type of CVT required in later years.

The road passenger sector is largely public service driven. As a result, a significant amount of CVT is received by employees in the large, well structured companies which employ them.

FUTURE TRAINING REQUIREMENTS

Training requirements that have been identified tend to follow on from the areas where the passenger transport sector is experiencing the greatest change (as per Section 2.2 Forces of Change). Principal requirements relate to:

Technology Developments: the introduction of new vehicle technology and new communications systems has implications for drivers and office managers.

Quality Standards and Customer Service: developing and maintaining standards of service quality in passenger transport companies requires all employees to understand the theory behind quality programmes

Safety Standards: both passengers and the European Commission are becoming increasingly concerned about the safety records of transport companies in such a competitive environment.

Forward Planning: as the requirements for training emerge it will be more important for companies to plan ahead and in doing so choose the most effective and efficient modes of training.

CHARACTERISTICS OF EXEMPLAR CVT

The report on CVT in the road freight transport sector identified a set of characteristics which were common to many of the exemplar CVT case studies. Some of these characteristics are less relevant for passenger transport companies as, although they operate in the same sector (road transport), they serve a market segment which has many unique characteristics. The main difference is that the customer (the passenger) has to be served throughout the duration of the journey whereas with freight transport the driver is on his own between the departure and arrival points. The idea of customer service therefore takes on an extra dimension in passenger transport.

Figure 4: Characteristics of Innovative & Successful CVT in Companies

- ⇒ *Assessment of training needs*
- ⇒ *CVT based on corporate objectives*
- ⇒ *Innovative methods of delivering training*
- ⇒ *Highly developed CVT delivery*
- ⇒ *Close links with training bodies, industry groups & equipment manufacturers*
- ⇒ *Co-Operation between smaller companies*
- ⇒ *Highly focused CVT; identified employee target groups*
- ⇒ *CVT focused on customer needs*
- ⇒ *Initial and continuous training linked together*
- ⇒ *Commitment to service quality included in training*

Figure 5 below highlights the interesting facets of CVT which were identified in each of the road passenger transport case study companies.

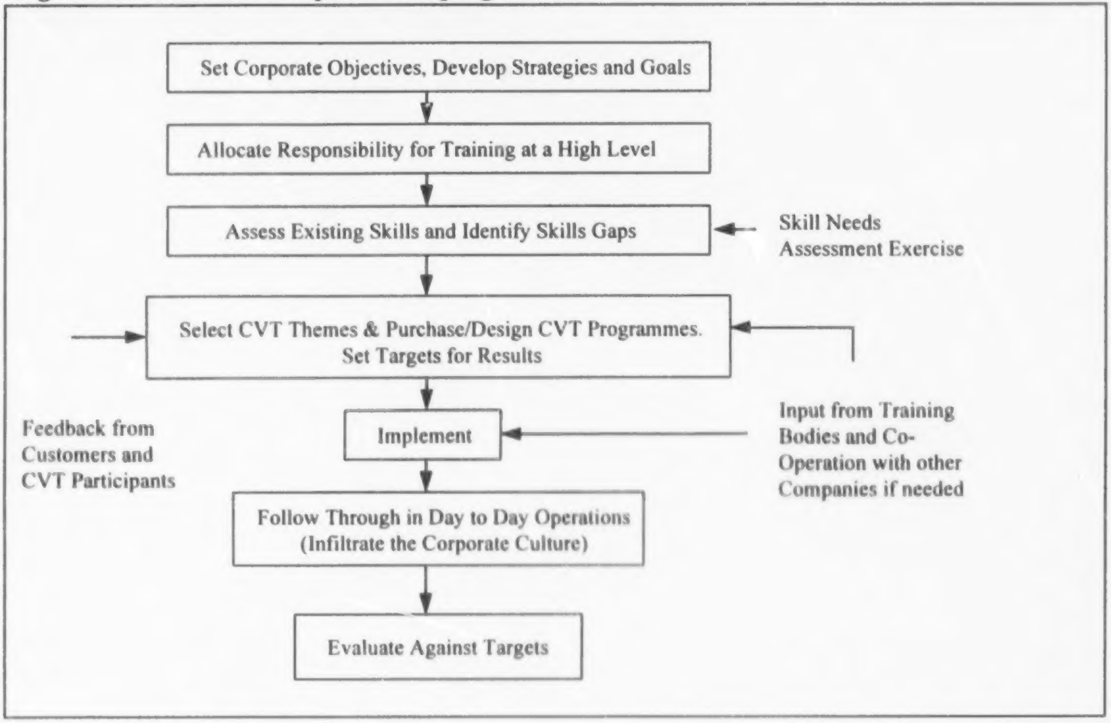
Figure 5: Interesting CVT Characteristics of Case Study Companies

CASE STUDY COMPANY	INTERESTING CVT CHARACTERISTICS
SAEM T2C (France)	The training is carefully targeted at specific employee groups. Both initial and continuous training is utilised and there is a well developed CVT programme. Role Playing is used for teaching communications techniques.
Setrap (France)	Training is customised to meet the needs of the employees
Assoc Bad Wurten & KM-Reisen (Germany)	Example of how an employer's association provides relevant training to its members. Also shows a company working with the Association.
KTEL of Evros (Greece)	Good use of customers to train employees
A Large Private Passenger Company (Netherlands)	Regular CVT takes place and assessment of needs is well structured. Temporary drivers are also trained and there is a close association with vocational training institutes and private institutes
A Passenger Transport Group (UK)	The CVT is based on corporate objectives and is implemented via multimedia equipment
Lucketts Travel (UK)	Good example of a small company which is growing and using CVT to help achieve its objectives.
Transports SADAR (Belgium)	The Company is closely linked with training associations

RECOMMENDATIONS

The framework for development of CVT which was developed in the road freight transport report is still highly relevant for companies in road passenger transport.

Figure 6: A Framework for Developing CVT


Set Corporate Objectives, Develop Strategies and Goals
Allocate Responsibility for Training at a High Level
Assess Existing Skills and Identify Skills Gaps
Skill Needs Assessment Exercise
Select CVT Themes & Purchase/Design CVT Programmes. Set Targets for Results
Feedback from Customers and CVT Participants
Implement
Input from Training Bodies and Co-Operation with other Companies if needed
Follow Through in Day to Day Operations (Infiltrate the Corporate Culture)
Evaluate Against Targets

1 - STUDY OBJECTIVES AND METHODOLOGY

This report has been produced under the umbrella of the FORCE programme which, since January 1995 has been combined with COMETT, EUROTECNET and PETRA to form the LEONARDO programme for transnational training activities in the European Community.

1.1 OBJECTIVES

The main purpose of this report is to identify exemplary and significant practices across the twelve member states in the field of continuous vocational training in the Road Passenger Transport Sector. It also seeks to discuss the transferability of such exemplary training from one country to a range of others or to the whole of the European Union.

It was hoped that one of the side effects of this study would be that the surveys behind it would contribute to the promotion of co-operation between companies with different levels of access, investment and provision in terms of continuing training (a principal objective of the FORCE programme). At the same time, it was hoped that these surveys would contribute to the European dialogue on achievements and training requirements in the road passenger sector. This Synthesis report therefore contains a discrete section of recommendations on methods to upgrade and harmonise continuous vocational training across Europe.

It was expected that an analysis could be undertaken of the key forces of change in the road passenger transport sector across the European member states and that it would be possible to identify the various ways in which countries have reacted to these changes. It was also planned to identify ways in which the case study companies reacted to these changes and how they utilised continuous training to handle new opportunities and threats and to meet new market demands.

It was hoped that a range of questions could be answered by the case studies, the sectoral reports and from the participation in the project of employers, workers and social partners. The questions included the following:

- What CVT programmes have been developed by road passenger transport firms and how are they developed?
- How are training needs assessed and are all sections of the workforce targeted for CVT?
- To what extent do *both* the worker and the company benefit from the CVT?

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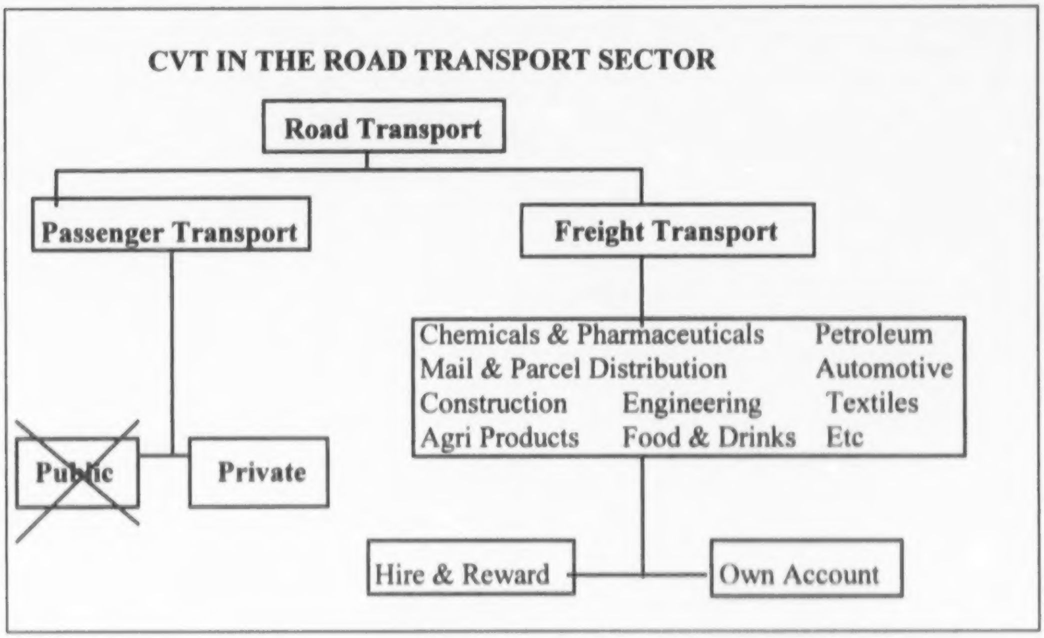
- What is the cost of CVT and do companies try to measure the benefits of the investment?

1.2 DEFINITION OF THE ROAD TRANSPORT SECTOR

To ensure that the national surveys and statistical data covered the same areas, the Road Transport Sector was defined, for the purposes of this study, as follows:


CVT IN THE ROAD TRANSPORT SECTOR

Road Transport
Passenger Transport
Freight Transport
Chemicals & Pharmaceuticals
Petroleum
Mail & Parcel Distribution
Automotive
Construction
Engineering
Textiles
Agri Products
Food & Drinks
Etc
~~Public~~
Private
Hire & Reward
Own Account

Two separate reports were produced as a result of this study, the main report 'Continuous Vocational Training in the Road Freight Transport Sector' was based on a study of the 12 Member States and 37 road freight transport company case studies. This is the second report which also utilises the national sectoral reports and the findings from the eight road passenger company case studies that were undertaken.

1.3 DEFINITION OF CONTINUOUS TRAINING

Continuing Vocational Training is defined by the Commission as follows:

"...all vocational training activities involving an enterprises employees with the exception of initial training of apprentices or trainees with a special training contract.

To qualify as continuing vocational training, the training must be planned in advance and fully or partially financed by the enterprise.

Continuing vocational training (CVT) covers the following training activities:

- *CVT provided through externally and internally arranged courses:*
    - *external courses designed and managed by organisations not part of the enterprise*
    - *internal courses designed and managed by the enterprise itself*
- *CVT in the work situation:*
    - *employees who have undertaken any planned periods of training, coaching, instruction or practical experience, using the usual work tools, either at the immediate work place or in the work situation.*
- *Other types of CVT:*
    - *Instruction at conferences, workshops, lectures and seminars, where the primary purpose is training;*
    - *planned learning through job rotation, exchanges, secondments and quality circles*
    - *self learning through open and distance learning, video/audio tapes, correspondence courses, computer-based methods or use of Learning Resource Centres"*

These definitions were used as a basis for the survey and were consulted when any clarification of CVT was required during company interviews.

During the course of this study it became clear to the rapporteurs and Central Team members that CVT, as defined above, could not really be clearly separated from initial training or from unplanned training. Initial training has a direct link to the requirements for CVT. In addition, companies appeared to be aware that employees were receiving valuable training "in the work situation" although many of them had not actually planned this training in that it had no definite timeframe and no formal structure. Accordingly, there is a separate section in this report on initial training and reference is also made at relevant stages to the role of CVT in the work situation (sometimes referred to as on-the-job training).

1.4 METHODOLOGY

The methodology essentially incorporated a study of the road freight transport sector in each country, together with a selected number of case studies which are likely to provide examples of innovative and successful training practices.

Four separate methodological memoranda were written and provided to the rapporteurs for the purposes of this study:

Methodological Memorandum I:	Methodology for the Sectoral Surveys on a Continuing Vocational Training Plan
Methodological Memorandum II:	Case Study Pre-Selection
Methodological Memorandum III:	Guide for the Presentation of the Road Transport Sectoral Analysis
Methodological Memorandum IV:	Guide to Carrying Out Case Studies

These methodologies were defined by the central team after meetings with representative social partners and sector experts.

As the case study and sectoral reports were being written, it became clear that it was not always possible to ascertain the information as outlined by the relevant memorandum. However, each rapporteur attempted as far as possible to stick to the format required.

On occasion, the information was not available for reasons of confidentiality or simply because the company had not recorded the information. In situations like this the rapporteur attempted to present the general picture. In particular, the data for the completion of the matrices as per Methodological Memorandum IV tended not to be available to any great detail. As a result, the rapporteurs incorporated the available data within the body of the text rather than present an incomplete matrix.

One area in which information was particularly scarce was that of cost analysis. Many companies could provide information on the cost of external course fees but not on the travel and accommodation expenses, on the wages which still had to be paid to course participants during the course, or on the cost of internally held courses. Increasingly, companies are paying more attention to the benefits of training as compared to the investment required. This has underlined the need for studies such as this one which can highlight the potential outcome of training investments.

On a European level, data could was not always available for each country and as a result some data charts - particularly in Section 3 - use a smaller range of countries to represent the European Union. However, using a combination of statistics, European reports that have already been compiled and the information that came from the national reports, it has been possible to present a fairly comprehensive picture of CVT across Europe.

1.5 SELECTION OF CASE STUDIES

Overall, a target sample set of fifty case studies was agreed for the whole study. Eventually forty four case studies were selected, including the private passenger transport cases. It was envisaged that these case studies would provide a mainly qualitative assessment of the most exemplary and significant practices found in continuing training in companies or by third parties on a company's behalf.

A pre-selection questionnaire was completed by ten potential participant companies and a summary sheet was also completed by each rapporteur for each company. This provided a screening process to ensure that the company was aware of the process of continuous training and that it could provide an suitable case study. The latter point was important as the sample set had to represent a diversity of trade sectors and company sizes. The pre-selection questionnaire also enabled rapporteurs to ascertain whether the companies would be willing to contribute to the study.

The two priority criteria for the case studies were the transferability and exemplary nature of the CVT. These were supplemented with three other criteria: the innovative character of the project, the type of company and type of training.

The fifty case studies were selected with these criteria in mind and with reference to the advice of the social partners represented on the monitoring committee. The case studies finally selected can be classified as shown in the matrix overleaf - passenger transport companies are highlighted in bold text. In summary, the passenger transport companies comprise a mixture of co-operative regular transport companies and private coach tour companies.

FORCE ROAD TRANSPORT SURVEY - FINAL CASE LIST						
Country	**Company**	**Fleet Size**	**Category of Transport**	**Type of Firm**	**Product**	**CVT**
Belgium	Corneel Geerts Transport	75	A	A	D	A,E,D
	Transports Baonville	6	A	A	D	B,F
	Vanneste	20	A	A	D	A,C,D
	Transports SADAR	**60**	**C**	**C**	**H**	E,C
Denmark	Roland Munch	100	A	A	D	B,D,F
	Adams Transport	66	A	A	F	A,D
France	**SAEM T2C**	**66**	**C**	**C**	**H**	**A,C**
	GT Location	852	A	A	F	B,C
	TFE	1600	A	A	A	E,A
	Comap	7	A	A	B	A,B,C
	Setrap	**30**	**C**	**C**	**H**	**B,C,F**
	Brinks	800	A	A	I	A,B,F
	STBC		A	A	D	C
Germany	Trans-O-Flex	348[1]	A	A	B/D	A,B,C
	Edgar Graß	26	A	A	E	B,F
	Kühne & Nagel	0	A	A	D	D,C,B
	Wendschlag & Pohl	6	A	A	B	A,B,C,D
	Assoc Bad Wurten & KM Reisen	**0**	**C**	**C**	**H**	**A,B,C**
	DHL	450	B	A	G	A,B
Greece	Eschilos	47	A	A	B	B,F
	3E	50	A	B	A	C,A
	KTEL	**79**	**C**	**C**	**H**	**G**
	Workshop	small	A	A	D	G
Ireland	Bell Lines	200	A	A	A/B	A,F,C
	Blueflite	11	A	A	D	A,C
	Irish Express Cargo	90	A	A	D	A,C,E,F
	Freightshift	small	A	A	D	G
Italy	Sinteco	70	A	A	D	F,A,E
	Tranni & Torresi	325	A	A	D	A,C,B

Contd/

Contd...

FORCE ROAD TRANSPORT SURVEY - FINAL CASE LIST

Country	Company	Fleet Size	Category of Transport	Type of Firm	Product	CVT
Luxembourg	Kühne & Nagel	>50	A	A	D	C
Netherlands	Anonymous	12	A	A	F	A,E,D,C
	Menken van Grieken	26	A	B	A	B,C
	GPdW	0	0	0	0	E,C,A
	Anonymous	**150**	**C**	**C**	**H**	**A,E**
Portugal	Luis Simões	200	A	A	A	C,A
	Amaral e Frias	60	A	A	A	C
	Workshop		A	A	D	G
United Kingdom	Lane Group	300	A	A	D	F,A,B,C,E
	Royal Mail	28000	B	B	G	F,C,E
	Du Pont		A	B	B	D,C,B,E
	Langdon	78	A	A	A	B,C,E
	Transport Develop' Grp	100	A	A	D	C,D,A,B
	A Passenger Transport Group	**1918**	**C**	**C**	**H**	**C,F**
	Lucketts Travel	**32**	**C**	**C**	**H**	**C,A,B**

Category of Transport	A=Freight Transport	B=Mail & Parcel delivery	C= Other	
Type of Firm	A=Hire & Reward	B=Own Account	C=Private Passenger	D=Other
Product	A=Agrifoodstuffs F=Furniture Removal	B=Fuels/Chemicals/Petroleum G=Mail/Parcels	D=Manufactured Prods H=People	E=Fertiliser I=Money
CVT	A=Customer Service E=Quality Delivery/JIT	B=Product Specific F=Safety	C=Driver Skills G=Skill Need Analysis	D= Logistics

1.6 THE CONTEXT

Each case study was assessed against a background of the company's general business activities and the relevant national sectoral study. This provided the appropriate context for the case study evaluation and was necessary before any overall conclusions could be drawn for the European report.

There is a focus on the forces which are driving change within the sector and on the ways in which each company is adapting to meet those changes. The role of training in this adaptation is then analysed.

1.7 PERFORMANCE OF THE SURVEY

The research and reports for the sectoral analyses and the case studies were carried out by thirteen national research teams (two for Belgium). Research was based on the guidelines as outlined in the Methodological Memoranda. Essentially, personal interviews were held on site by the rapporteurs with a cross section of Management, Employees and industry representatives. Some case studies required several visits to the company site and a certain number of the companies were reluctant to contribute more than one session to the study or to provide all of the information which was requested.

Changes were made to reports according to the feedback from the national rapporteurs and the advice of the Monitoring Committee. A quality control system was employed under which all draft reports (cases and sectoral studies) were reviewed and compared against the agreed Methodological Memoranda and the objectives of the study. Quality Control also aimed to produce comparable reports where possible, so that the final synthesis report could be more meaningful.

2 - NATURE OF THE ROAD TRANSPORT SECTOR IN THE EC

2.1 STRUCTURE OF THE SECTOR

Demand for private mobility is growing. However, this does not mean that bus and coach transport is also growing. The growth in demand for private mobility is mainly in the area of private cars. Even relatively big increases in excise duties on fuel prices (as in Germany and the Netherlands in 1991) have not affected car ownership or usage. The need for cuts in public spending has led to pressure on the existing infrastructure of regular bus lines which are (partly) financed by public funds.

A Large proportion of coaches services are closely associated with tourism. This mode of tourism transport is very popular among lower and medium income household and also amongst senior citizens. However, car ownership is also increasing in these groups. Moreover, traditional destinations like Greece or Turkey are becoming more popular and this is stimulating air traffic. On the other hand, the opening of Eastern Europe offers a range of alternative destinations. Operators are beginning to try to attract other market segments by offering high quality services and new products such as shorter cultural tours or festival trips.

2.1.1 Size and growth of the sector

In this section the size of the road passenger sector will be discussed, making use of two indicators:

- the stock of buses and coaches
- the number of passenger-kilometres

The statistics describe the total bus/coach sector: both private as well as public companies are included. The reason for this is that existing statistics in most cases do not discriminate between private and publicly owned companies. In a lot of countries both groups partly execute the same kind of activities. Private road transport companies can often operate regular interurban routes, because they are leaseholder or have concessions for this by public authorities. In just a few of the national reports is it possible to make a distinction. The statistics of Eurostat and the European Conference of Transport Ministers form the basis for most figures. This has the advantage of providing more or less uniform definitions. In some cases, more recent data out of the country reports are also used.

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Stock of buses and coaches

In Figure 2.1 the stock of buses and coaches are presented for the separate EU-countries. The total number of buses and coaches around 1991 is roughly about 430 thousand. In 1981, this was about 390 thousand. So the stock has increased, but not very fast: on average about one percent a year. A striking point when comparing countries is that Italy has the highest stock, higher than for example Western Germany, United Kingdom and France.

Figure 2.1 Stock of buses and coaches per EU-country, in thousands, 1991

Belgium	15
Denmark	8
France	75a)
Germany (West)	70
Greece	231b)
Ireland	4
Italy	82c)
Luxembourg	1
Netherlands	12
Portugal	12
Spain	47
United Kingdom	80
EU-total	429

a)1990 b)1992 c)1987 Source: Eurostat, Belgium, Greece: National reports.

With the help of this stock, transport services are provided to passengers. The number of passenger-kilometres is often used as a production indicator for the scale of these services. If a bus travels 100 kms with 30 passengers, the total passenger-kms is 3,000 (100 x 30). The relative positions of countries on this production indicator do not have to be exactly comparable to the relative positions in the number of buses, because the intensity of usage and the (actual and maximum) capacity of passengers can differ.

Figure 2.2 The number of passenger-kms and yearly growth

	Passenger-km (in billions)			*Yearly growth*
	1980	*1986*	*1992*	
Belgium	9.1	9.5	10.5[a)]	1.6%
Denmark	7.3	9.1	9.2	1.9%
France	38	39.4	41.1	0.6%
Germany (West)	65.6	53.1	56,7[b)]	-1.4%
Greece	5.8	5	5.2	-0.9%
Italy	57.8	70,5	87.7	3.5%
Netherlands	13.2	12.1	14.5	0.8%
Portugal	7.8	8.3	11.4	3.2%
Spain	28.1	33.5	41.2	3.2%
United Kingdom	52	47	44	-1.4%

a) 1989
b) 1990

Source: European Conference of Ministers of Transport. This source offers no figures for Ireland and Luxembourg.

In Figure 2.2 the scores of different EU-countries for this production indicator are presented, as well as the average yearly growth. The growth is strongest in three southern European countries: Portugal, Spain and Italy with yearly growth rates over 3%. In the other countries the growth was smaller. In Germany, Greece and the UK, the number of passenger-kms even decreased.

These growth rates are much smaller compared to the growth rates of the road freight transport sector. The tonkms of transport of freight by road for almost all countries grew by 3.5% or more per year in the period 1981-1992. The reason for this is that the modal split in freight transport developed in favour of road transport, while in long distance passenger transport the move has been in the opposite direction against the growing private car ownership and use and the decreasing cost of travelling by aeroplane. Air transport is becoming popular because the time wasted on travel represents a very real opportunity cost to the business traveller and the demand for leisure has favoured longer distances for the 'long' break and shorter distances for the 'short' break, where in the case of the latter time is again a premium. The introduction of high speed trains appears to have the effect of stimulating overall demand for transport so that it takes market share form regional air transport rather than from the transport of passengers by buses and coaches.

To make a fair inter-country comparison, the number of passenger-kms should be related to the size of population (Figure 2.3). Denmark and Italy score highest in the number of passenger-kms per head of population. Low scoring countries are Greece, France and the United Kingdom.

On average the number of passenger-kms per head of population is 1,000, which means that an average person in the EU travels 1,000 kilometres a year in a bus/-coach.

Figure 2.3 Passenger kms per head of population, 1992

Belgium[a)]	1,058
Denmark	1,800
France	741
Germany	881
Greece	519
Italy	1,540
Netherlands	978
Portugal	1,171
Spain	1,067
United Kingdom	775
EU-total[b)]	1,000

a) 1989

b) Excluding Ireland and Luxembourg.

2.1.2 Transport Mode Shares and Trends

Two important conclusions of sections 2.1 have been:

- the growth of bus transport has only been limited and in some countries the number of passenger-kms has even declined
- the extent to which use is made of bus transport differs per country.

Both conclusions are related to the development and relative differences between countries in the modal split of passenger transport (ie transport of passengers by land). The latter point is illustrated in table 2.4. The proportion of buses and coaches is in most countries larger than the proportion of rail transport, but very much smaller than the proportion of private cars. The proportion of buses and coaches varies between 6/7% (France and the United Kingdom) and 28% (Greece). Greece is clearly the highest scoring country. Other high scoring countries are Denmark, Italy and Portugal. So, in general, the Southern European countries relatively often make more use of buses.

Figure 2.4 Modal split of passenger land transport, 1992

	ModalSplit		
Country	***Rail***	***Buses and Coaches***	***Private Cars***
Belgium a)	7	11	82
Denmark	7	13	80
France	9	6	85
Germany	7	8	85
Greece[b)]	8	28	64
Italy	7	14	81
Netherlands	9	8	83
Portugal	6	13	81
Spain	7	14	78
United Kingdom	5	7	88

a) 1989 figures b) 1985 figures

Source: European Conference of Ministers of Transport. This source offers no figures for Ireland and Luxembourg.

The share of bus/coach transport is small compared to private cars. Moreover, the share of bus transport is declining in almost all countries (Figure 2.5). Belgium is the only country without a declining share of bus transport. The drop in the modal share is particularly strong in Germany and the United Kingdom.

Figure 2.5 Trends in Modal Shares Of Passenger Land Transport

	Modal Split of Bus/Coach Transport	
Country	***1980***	***1992***
Belgium	11	11[a)]
Denmark	15	13
France	7	6
Germany (West)	11	8[b)]
Italy	14	12
Netherlands	10	8
Portugal	14	13
Spain	16	14
United Kingdom	10	7

a) 1989 figures
b) 1990 figures
Source: European Conference of Ministers of Transport.

The drop of the modal share of buses is the consequence of the fact that transport of private cars has been increasing faster than overall mobility. The position of private cars has improved because of factors like:

- the rising demand for extensive private mobility, arising from the desire to travel door to door with maximum flexibility;
- rising real personal disposable incomes;
- the increasing trend of households in owning more than one vehicle.

2.2 FORCES OF CHANGE

The developments within the Road Passenger Transport Sector are similar to those in the road freight transport sector. The differences lie mainly in the extent to which the change is occurring and on the impact that it has on business strategies and on the type and level of CVT which is adopted by the company. Figure 2.6 summarises the areas where the sector is developing and forcing change within the entire road transport industry.

Figure 2.6 Developments and Forces of Change in the Road Transport Sector

Safety Issues	driver stress and traffic levels
	vehicle maintenance and features
	regulations for drivers and road standards
Technology Developments	admin & operations, IT & EDI
	vehicle technology
	road infrastructure
Customer Care & Quality	quality standards
	customer demands and customer care
	impact of new technologies
Legal Requirements and Changes	
Environmental Issues	transit traffic
	pollution
	fuel efficiency
	alternative transport modes

Safety Issues

The main concern for passenger transport companies appears to be the risk of accidents which results from driver stress. The high levels of traffic and road works make it difficult for drivers to keep to timetables.

There has also been a number of high profile bus accidents in recent years and customers are beginning to look for assurances about safety procedures and records in transport companies. However, safety is affected by the road infrastructure and the quality of the vehicle being driven, as well as by the driver. The transport companies must therefore ensure that their vehicle fleet is maintained to an acceptable standard. They must ensure that vehicle manufacturers improve safety features regularly and that local, national and European roads are built and maintained to the highest standards. Such issues are being dealt with at all levels.

At a European level, the Trans-European Road Network (TERN) is now being developed and this will be done in conjunction with traffic control improvements and improvements in road markings.

Across Europe buses and coaches have significantly less passengers killed or seriously injured per passenger-kilometre compared to cars. On average, it works out at about 1 to 18. However, there are still demands to improve safety for coaches, including such measures as compulsory wearing of seat belts and in some Member States improvements in the road worthiness of vehicles.[1]

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[1] Panorama 1994

Case Example: SETRAP (France) - SAFETY -

1. **Training Course on Safety in School Transport**: This course is attended by all company drivers as they may be required at any time to drive a school bus. It lasts two to three days and covers a variety of subjects, like safety, school transport rules and how to relate to children. Drivers learn how to behave with children of different age groups. They also take part in bus evacuation and fire drills.

   This course is divided into two parts:

   - a theoretical part that explains safety in school transport using slides and videos,
   - a practical part that takes place on board vehicles and incorporates schools and fire brigades in fire drills and evacuation procedures.

   Trainees receive an end-of-course attendance certificate. The course is beneficial in that it places in a real-life context.

2. **Training course on Rational Driving:** this course also has both a theoretical and practical element. Practice takes place on board teaching buses where each trainee is filmed so that he can take stock of his errors and compare them with video-taped instructions. Some tests are performed outside working hours while others take place during normal service, in the presence of customers, with drivers working in a real life environment.

   SETRAP believes that this course serves to reduce accidents, to limit driver stress and to improve service.

Technology Developments

In bus and coach tour companies developments in technology are impacting upon office management and to a certain extent upon the types of vehicles being driven. Computerisation is enabling office managers and schedule planners to ease their workload and to prepare efficient and effective passenger services. With information technology and electronic data interchange, it is possible for the companies to: reroute buses where traffic congestion or roadworks are causing problems, to allocate the most efficient number of buses, to monitor passenger levels on a real-time basis and to organise office records to provide more accurate, timely and meaningful information.

Developments in vehicle technology are increasing at a faster rate then ever. The vehicle equipment manufacturers are under pressure to produce faster, better and cheaper in an increasingly competitive market. This impacts on the passenger transport companies who have a wider range of vehicles to choose from and who need to ensure that their drivers can make the most of the enhanced performance capabilities of their vehicles. New vehicle technology with, for example, hydraulic controls for gear boxes, speed limiters and air conditioning also requires the skills and knowledge of maintenance staff to be updated.

The German national report refers to two technological developments which will impact on the passenger transport sector in the future. The first is the introduction of so-called "megaliner" tourist buses which are 15 metres long instead of the usual 12 metres.

However it is expected that only a relatively small number of buses will be produced to this specification. The second development is the restructuring and functional enrichment of the driver's cockpit towards a cockpit based on micro-electronics. This is expected to have a greater impact on qualification requirements. It refers to modular type driver control panels linked to usage of brakes, fuel consumption, control of air-conditioning and communication with traffic managers in the head office.

Road passenger transport companies will also benefit from any improvement that can be made to the surface of the roads on which they travel. Developments in materials used and improvements in road repair can help to reduce fuel consumption and vehicle wear and tear costs. It is therefore in the interest of these companies to join in the efforts at national or European levels to improve road surfaces.

A European Survey (DRIVE project CASSIOPE 1991) showed that new technologies are relatively well distributed in European bus companies: 87% of networks have radio communications systems, 70% have micro-computers, 44% have a mainframe computer and 28% have an automatic vehicle monitoring (AVM) system.

This is not necessarily the case for some southern European countries - Greece in particular - but in general it emphasises the need for training in the applications of advanced technology. Continuous training is particularly important as many existing employees will not be familiar with the technology or will need to have training to update their knowledge as the technology itself develops.

The European Commission has played a key role in encouraging advances in communications technologies and their integration with commercial environment. Initiatives such as the DRIVE are two examples of such support for the EU.

EU Initiative Example: DRIVE

DRIVE: **D**edicated **R**oad **I**nfrastructure for **V**ehicle Safety in **E**urope

Duration; 3 years of the Second Framework Programme, continued within Telematics in the Third Framework Programme and likely to be continued in the Fourth Framework (1994-88)

The main objective of DRIVE is to develop telematics technologies and systems to improve road safety, maximise road transport efficiency and contribute to environmental improvement.

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Customer Care and Quality

Customer Care is a key issue in passenger transport service. It is a particular issue for drivers who are often required to deal with passenger queries and complaints. Many companies also have tour guides who travel on the buses and take over the customer care role. This places great emphasis on the communication skills required by such employees. Basic skills covering personal hygiene, knowledge of the local area, languages and first-aid are required. Employees should also be able to react in emergency situations and to handle troublesome passengers with minimum disruption to others.

Across Europe there has been a move to improve the standard of customer care in passenger transport by setting up quality or customer care grading systems. In Germany, for example, around 900 of the 1,200 tour operators have affiliated to the **Gutegemeinschaft Buskomfort (gbk) e.V**. which is an association for quality certification. The association confers the quality label 'Buskomfort - RAL' ie certificate of bus comfort and it classifies the buses according to a star system. This system has led to the gradual amendment of CVT programmes for drivers which traditionally focused solely on the technical driving functions.

Similarly, in the United Kingdom, the recently devised system of National Vocational Qualifications includes **NVQ's for Bus & Coach Driving & Customer Care** (Bus & Coach Training is the recognised industry training organisation). By the end of 1994 just 4,412 of the 105,000 potential targets were pursuing or had been issued with certificates. The small take-up is probably related to the fact that the qualifications are new and the UK report predicts that the introduction of more competition to the bus and coach sector will give greater prominence to the need for customer care in the future. The experience in the UK to date is that the new small operators are less training conscious than the previously regulated industry. However, the larger operators have been able to invest in smarter and more comfortable vehicles to attract more customers.

In the Netherlands it has also been found that there is a great need for training in customer care. Customers are increasingly using safety, comfort and response to individual requests as criteria for choosing their coach company. Consequently the **Dutch Foundation for Quality Coach Companies** has been founded and a quality mark system has been set up. The Foundation can at any time withdraw the quality mark from a company, while companies which have received the quality mark may decorate their coaches with a recognisable logo. The quality mark has a direct link to training as a certain proportion of the drivers must have attained the touringcar-mark on their passenger transport diploma. Plans are also under consideration for the development of a classification system for coaches, so that consumers understand why they have to pay more in one case than in another.

In contrast to the majority of European countries, Greece is more worried by the poor infrastructure, the second rate vehicles and the lack of information technology usage within the bus and coach sector than by the issue of customer care. Bus companies commonly buy second hand vehicles from other European countries and the sector is run by so many committees that decisions relating to change are not easily or quickly made. The national report suggests that a certain level of 'deskilling' is required before any training for adapting to new vehicles and technology can be introduced. What is clear from the report is that the focus is on upgrading equipment and infrastructure, followed by the implementation of training for the most effective use of the new facilities and only then will companies begin to focus on customer care.

Case Example: Lucketts Travel (UK) ***- CUSTOMER CARE -***

The approach to training at Luckett's Travel emphasises that it is the Company's drivers who deliver the on-board service and the office people who negotiate arrangements by telephone, that differentiate the Company from its competitors and therefore need continuous training.

Lucketts Travel ensure that training standards are achieved through direct control by the directors. They use standards to which they adhere strictly. Administrative, driving and maintenance staff work with the 3 family directors to ensure the standards set are maintained. As a result there is evident a team spirit effectively co-operating to give customers the best service available. Customer surveys now show that 95% of respondents consistently rate the company as "good or very good" in all service areas.

Lucketts works well with outside training providers. They employed an external advisor to create a whole new "customer centred" approach to the company which is relatively new to the industry. They also use their Industry Training Organisation which is Bus and Coach Training as a training provider.

Legal Requirements and Changes

An EU Directive came into force on 1 January 1990, strengthening the existing provisions for becoming a passenger transport operator. In particular, it specifies precise minimum financial requirements, to ensure the viability of existing and potential operators and it makes the passing of a written examination compulsory for new entrants

In 1992 the EU Council of Transport Ministers adopted the regulation on the freedom to provide intra EU services for road transport by bus and coach. Under this regulation authorisation is no longer required for most occasional services and for shuttle services if accommodation is included. However, for regular and shuttle services without accommodation, authorisation is still required.

In addition, from 1 January 1993, EU legislation allows operators to provide certain non-regular services under the same conditions as resident carriers as from January 1,1993 and all such services as from 1 January 1996. From 1 January 1996 the minimum age for a driving license in passenger transportation will be 21 years.

Each country also has its own set of rules governing road passenger transport for situations which are not governed by the European legislation. Many such situations can occur in a regulated or semi-deregulated passenger transport market. The road passenger transport sector is not as deregulated as the road freight transport sector.

This is because of the dominance of public services - many countries are working out ways in which they can privatise the passenger sector.

In the UK the bus passenger services have been officially deregulated since 1985. Now commercial companies run their own buses on a variety of routes and the local councils have tendered routes ie those which are less commercially viable. Companies bid for tendered routes and the Transport Passenger Executive usually accepts the lowest bid and then provides a certain level of funding for the selected company to service the route. Statistics now show that commercial operators accounted for 80% of local bus vehicle kilometres in 1992/3 as compared to 9% in 1985/6. In Portugal the statistics for 1992 illustrated that regular transport of passengers was undertaken roughly 50% by private operators and 50% by public operators. Meanwhile, in the Netherlands regular passenger services are being made more accessible to private companies. However, not many of them have entered the market yet as regular services are still strictly subject to licences. The private companies are calling for public tenders to be introduced for regular services. The private companies are also complaining that liberalisation means that subsidised public transport companies can enter the private coach transport market. This is seen as a form of unfair competition.

Legislation therefore has two main effects. It can set minimum requirements for qualifications and standards and it can change the competitive structure of the market.

Environmental Issues

There is a growing level of public opinion and debate on the topic of environmental protection. The Task Force on the Environment and the EU Internal Market (report 1990) considered that the transport sector had "...the most important environmental impact of the Internal Market...". In particular, road transport was the worst offender as opposed to alternative transport modes - with rail and inland waterway transport having lower impacts than either road or air.

The European Environmental Agency's (EEA)'Europe's Environment' report (Feb 1995) states that in a business as usual scenario trends indicate that energy consumption and hence transport related CO2 emissions would increase by almost 25% between 1990 and 2000. Facts like these, together with public interest in environmental protection, are creating pressure on all road transport operators to significantly reduce the adverse impact that the sector has on the environment.

Despite the ugly facts that have been presented above, comparisons of coaches and private cars in terms of their effects on the environment present a favourable picture for coaches. On average for both urban and non-urban utilisation, the bus requires 15 passengers to 1 passenger in a car to equate NOx emissions, 2 passengers to equate HC emissions and 4 passengers to equate CO2 emissions. In emissions of CO2 buses and coaches are estimated to contribute only 1.6% of the total in the Community compared to 55.4% for private cars.

However, in order to make any improvement in the situation all types of transport operators need to come together to implement controls and research. The EEA's 'Europe's Environment' report listed measures which are already being undertaken to control the environmental impact of transport and these are presented below:

Measures To Control The Environmental Impact Of Road Transport

Technical Measures:
Emission standards on CO, VOCs, NOx and particulates for all kinds of motor vehicles (e.g. by the EU and UNECE);
Fuel quality standards concerning for example lead, sulphur, benzene (e.g. by the EC);
Noise standards for motor vehicles (by the EC);
Development of electric cars and fuel cells.

Construction Measures:
Noise protection walls along major roads and motorways, low-noise asphalt;
Bridges and tunnels for animal crossings;
Integration of infrastructure into landscape (e.g. via environmental impact assessment).

Transport Planning and Traffic Management:
Provision and improvement of public transport facilities;
Provision of separate cycling tracks;
Restriction of car use in inner cities and residential areas via parking restrictions, Pedestrian zones, speed limitations, road safety measures;
Extension of rail, waterway and combined transport;
Bans on through traffic.

Economic Instruments:
Internalisation of external costs for all transport modes through taxes and fees (e.g. energy tax, fuel tax, road pricing and parking fees):
Differentiated purchase taxes e.g. between leaded and unleaded petrol
Scrappage benefits to encourage owners to replace older polluting vehicles with cleaner vehicles fitted with catalytic converters.

Others:
Regular in-service test for motor vehicles;
Time restriction on transport movements, especially bans on night and weekend driving for trucks;
Lowering and enforcement of speed limits;
Encouraging smoother driving behaviour;
Educational campaigns;
Car pooling;
Staggered working hours; encouraging working from home;
Carrying through existing resolutions (e.g. ECMT resolutions on Transport and Environment (no 66) and Power and Speed (No 91/5) and conventions (e.g. UNECE Sofia protocol on NOx emissions, 1988).

Source: Europe's Environment - The Dobris Assessment, EEA report Ed.
D Stanners & D Bordeau, Feb 1995

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2.3 EMERGING BUSINESS STRATEGIES

As relatively few case studies were reviewed for the passenger sub-sector of road transport it is difficult to categorise the business strategies that are being followed in that sub-sector. However the national reports, combined with the case studies, do provide a broad picture of the future road passenger transport industry.

The text below illustrates the extent to which passenger transport companies are amending their business strategies in consideration of the forces of change which have been discussed in Section 2.2. The strategies which are being adopted tend to depend on the market in which the passenger companies are operating. For example, a company providing regular transport to the public may have a different agenda to those operating purely in the private coach tours market. There is also a large number of passenger transport companies who are now providing both types of transport as a result of deregulation many of the small private companies appear to have eagerly accepted service contracts from public authorities for regular transport as this reduces the seasonality of their business.

By summarising the business operations and strategies of the case studies from this survey it is possible to get a picture of business strategies that are being adopted:

> **SAEMT2C (France): Adopting a strategy of gaining competitive advantage through investment in advanced technology.** This is a semi-public corporation which supplies passenger transport services to local authorities. It is a company that "keeps in step with a changing environment" by providing a "high standard of service with a full range of product lines". Service lines include regular transport, express transport at peak hours and transport on request for disabled passengers (the company has specially equipped vehicles for this purpose).
>
> The company has decided to take the lead in technological progress and has introduced a computer operated monitoring system for real-time monitoring of buses: it serves to regulate traffic and give instructions to drivers so that they can keep to timetables. A passenger information system is planned and an automatic fare paying system will also be adopted. In this way the company will keep up with technological advances and will protect itself from the competition.
>
> **SETRAP (France): Following a customer focused, market oriented strategy.** This company operates in two market segments ie local/intercity transport and coach transport/package tours. In recent years SETRAP has decided to concentrate on the local versus intercity transport area so that it can provide better coverage and access and improved comfort. To do this it has plans to merge with loc[illegible] transport operator and to train staff in commercial and communications skills. Recently a Customer Division has been created to provide customers with better access to information.

KTEL of Evros (Greece): Adopting a strategy of consolidation and reorganisation. This is a co-operative of a large number of independent bus operators organised at a regional level. Its main objective is currently: the integration of public transport routes, operators and modes. In particular, this integration will focus on the linking private car transport with other modes (along the Park 'n Ride theme) and also on linking functions by utilising new technology. In Greece the impact of deregulation and increased competition has not yet occured. This company is concentrating on becoming more effective and efficient rather than being market focused and gaining competitive advantage.

A Large Private Passenger Company (Netherlands): Implementing a strategy of market segmentation and penetration. This company provides passenger transport services in the travel coach business and in the regular public transport arena. However, it has recently decided to concentrate on the travel coach business and to increase sales in that market by developing new products for the various market segments. Examples of innovative products include: the sleeping coach, the royal class coach and the bicycle coach. The company has also developed close relations with the air travel companies and offers combined air/coach travel tickets. Quality is a strong feature of the service - the company is a co-founder of the Foundation of Quality Coach Companies in the Netherlands.

KM-Reisen GmbH (Germany): Implementing quality systems and investing in training. This company offers a mix of both scheduled bus services and tourist coach travel. The strategy of the company is not very clear as it is presented within the case study on the Verband Baden-Wurttembergischer Omnibusunternehmer (WBO - an employer's association of private omnibus companies). However, it is evident that the company wants to provide a quality service and that it has a high level of commitment to training staff.

SADAR (Belgium): Following an expansion strategy and aiming to become more commercial in its approach to business. SADAR provides regular passenger transport for a public authority. It is currently aiming for quality certification and believes that for the future it must become more commercially focused and less dependent on winning business from public administrations who are rationalising.

A Passenger Transport Group (UK): Adopting a strategy of maintaining competitiveness through increased flexibility, increased service quality and increased efficiency. The company provides transport for passengers on a regular basis, non-regular basis (coach transport) and on an express service basis. It has experienced substantial change in the 1980's with respect to ownership, deregulation and market position. In order to maintain its competitive position there has been a certain amount of rationalisation. Remaining staff are receiving training to upgrade skills and to acquire new skills. The Company aims to be more adaptable and innovative in the future.

Lucketts Travel (UK) : Implementing a strategy of winning market share by providing the highest levels of service in its market segment. Lucketts operates a coach and hire tours business. It seeks to provide the highest level of service through the the application of CVT programmes and continuous performance assessment. Training is based on a customer-centred approach which is all important to the company. Lucketts also operates a driving school and this gives them access to drivers who show great potential, thus helping the company to continue to provide a high level of service.

What is clear from these summaries is that most companies need to focus on providing a quality service in their chosen markets. To do this they are having to train their staff in certain areas and sometimes they are having to focus more tightly on a smaller range of market segments. The latter is often important where there is stiff competition. Some companies are content to rationalise, become more flexible and upgrade their service quality. Others want to do all of that and to expand market share by being innovative in their product range and staying at the leading edge of technological change.

2.4 FACTORS INFLUENCING THE DEVELOPMENT OF THE SECTOR

2.4.1 International Competition and the Impact of The Single Market

The report on CVT in the Road Freight Transport Sector discusses in detail the developments in international competition and the impact of the Single Market on road transport. This section refers to the main development and discusses the relvance for passenger transport in particular.

Currently the principal objectives of the Community transport policy can be summarised in terms of the creation and promotion of **sustainable mobility** within the Single Market. The emphasis of the common transport policy is now clearly on improving the level of competition within the Single Market for transport services and can be summarised as follows:

- creation of an ever more open Community market for transport services;
- securing open and fair competition, increasing the competitiveness of Community transport companies as well as improving their financial performance;
- increasing the operational efficiency of Community transport companies with concern for critical issues such as security, safety, improved working conditions and environmental questions;
- reinforcement of socio-economic cohesion through the contribution to regional development brought by trans-European transport networks, the reduction of disparities between regions and the development of transport services between insular and peripheral regions; and

- development of relations with countries outside the European Economic area in the transport area, where the transport of goods and persons between these countries and the Community is significant.

After a slow beginning the implementation of a solid legislative framework for the creation of a free market for the transport of good is now in place, with companies able to freely provide transport services independent of nationality or place of establishment. This legislative framework is both of a direct nature, eg driver working rules, and indirect such as in the area of insurance, safety, etc.

Increased Competition in the Community Road Transport sector

The increase in competition within the Community road transport sector is not only impacted by the Community's common transport policy. There are many other areas of Community policy and legislation that at both the Community level and the Member State level have a significant impact on the structure and situation of the road transport sector within the European Union.

The impacts of Community policy, legislation and actions are so varied and impact so many areas of operation of road transport companies and the structure of the sector that it is not feasible to describe specific cause-effect relationships between individual policies or legislation and the impact on the road transport sector. In addition, different policies and measures have different levels of impact on the structure and operation of road transport activities in different Member States depending on the state of development and competitiveness of the sector at the national level. It should also be remembered that, in addition to the impact of Community policy and legislation, the road transport sector is forced to adapt to changing economic, competitive, social and technological conditions.

In general, increased competitive pressures have resulted in a greater level of recognition of the need for increased levels of quality in the provision of road transport services, in response to the changing profile of demand and the increasingly rigorous price/value demands made by clients. The response to increased competitive pressure through recourse to new technologies is particularly notable in the French case study SAEM T2C. As a rule, increased competitiveness has been secured through tighter cost control at all levels, through increased productivity of operational and support staff, as well as through the absolute reduction of overhead and fixed costs. Most of the passenger case studies in this survey were also investing in new technologies or concentrating more on specific markets and aiming to provide a better quality and customer focused passenger transport service.

Although the impact of the Single Market has had a strong impact on the nature and structure of the road transport sectors of almost all Member States, Greece stands out as a market in which the deregulation of the transport sector has had less of an impact than has been the case in other markets, due primarily to the country's geographical location.

2.4.2 Infrastructure & Traffic Planning

One of the more significant factors affecting the service quality and productivity levels of the road transport sector is the actual road network or infrastructure, in terms of its scope, quality, usage levels, support facilities, etc. This has already been discussed to some extent in Section 2.2 Forces of Change and it is also discussed in more detail in the Road Freight Transport report.

It has been accepted by the Member States of the Single European Market that a strategic approach to the development of road infrastructure on a European basis is more sensible. In October 1993 a Trans-European Road Network (TERN) was adopted as the official road network of the Union. The strategic objectives and plans for achieving the TERN are:

Development of an Interconnected Network - incorporating the building of circa 120 "missing" motorway links of over 12,000 kms of which two fifths are in peripheral countries. The deadline for this is 2010.

Achieving Inter-operability of the Network - involving the standardisation of inter-urban road topology such as geometric standards, user service levels, signs and marking.

Management of the Traffic Network - through development of telematic systems, modal interchanges and road pricing related to congestion.

The attached Map illustrates the Trans European Road Network (TERN) outline plan, showing existing road networks, planned road networks and also "priority corridors in Eastern Europe". The benefits for international passenger transport companies and for networks like the Eurolines network are clear. Journeys will be shorter, safer, easier to plan etc.

The Committee of Enquiry into Road Freight Transport in the Single European Market (July 1994) welcomed the development of the TERN and further recommended:

- the full use and development of Information Technology (IT) in order to achieve the best possible use of capacity, including aspects of safety such as the monitoring of hazardous goods (this applies to freight transporters), weather and road conditions

- the provision of adequate service facilities , particularly on strategic corridors, relating to information transmission, transhipment, inter-modal exchanges, payment of user road charges, vehicle maintenance and checks, secure parking, storage and drivers rest facilities.

2.4.3 The Role of Multinationals and Small Companies

The road passenger transport sector, if state owned services are excluded, can be said to be fragmented. However, the situation varies from one Member State to the next. There are a large number of operators with fleets of varying size and although some very large operators exist the majority of enterprises are small-sized. The sector is therefore generally considered unconcentrated.

However, the state owned passenger transport services tend to dominate in most countries. In the UK there has been considerable deregulation and privatisation since the late 1980's but most other European countries have not yet followed suit. The state owned services cannot therefore be ignored when examining training in road passenger transport companies. They have an influence which is similar to the large multinational companies who can afford to spread their training costs over a wide base and to experiment with training techniques.

The role of multinationals in the passenger transport sector does not appear to be as clear as it is in the freight transport sector. This is probably because most of the larger firms are state owned and concerned primarily with national and local markets. If more of the large firms were privately owned they would undoubtedly consider foreign countries as potential markets. The effect of this would be the development of more advanced communications systems, vehicle technology and flexible, logistics systems because the companies would be trying to achieve economies of scale while providing acceptable or high standards of service to their customers.

Most of the national reports forecast an increase in deregulation and privatisation and this could be expected to result in more large private companies who would play a lead role in developing the passenger transport market. The small companies would be more likely to target local niche markets which they can serve through providing either efficient services at low cost fares or added value services with strong customer relationships at premium fares.

Examples of Large Road Passenger Transport Operations

The ***Eurolines*** bus network is one example of passenger companies getting together to provide a European transport network. Some 40 companies who provide regular international transport are members of the Eurolines network. The consortium allows co-operation and efficeincy in aranging and pooling services as well as sharing the costs of marketing. Another such operation is ***Europabus*** which operates in Germany.

Panorama '94 identifies some of the larger private operators in the EU markets: ***National Express*** in the UK, ***De Jong Intratours*** and ***Beuk*** in the Netherlands, ***Iberbus*** in Spain, ***GTI*** in France, and ***Deutsche Touring*** (subsidiary of the German Railways) in Germany.

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3 - EMPLOYMENT

The following sections deal with various aspects of employment which determine conditions in the workplace and which influence the type and level of CVT which is provided for employees.

3.1 EC LEGISLATION

EC legislation has established three types of international coach services: occasional, shuttle and regular services. Occasional and shuttle services are basically tourist services. International regular services are subject to similar rules for national services. There is also a category known as special regular services which mainly consists of the carriage of employees to their place of work and carriage of school children.

Until the Single European Market, the international carriage of passengers by coach and bus was governed by three regulations (117/66 providing common rules for the international carriage or passengers by coach and bus; 516/72 providing rules for what are defined as shuttle services by coach and bus between Member States; and 517/72 concerning regular services.) Together, these established common rules for international passenger transport, defined the defined types of services offered and laid down corresponding administrative procedures.

The European Commission proposes to ensure that transport companies from all Member States have access to international markets within the Community regardless of their EU nationality or domicile of business.

Due to fundamental differences between road haulage and road passenger transport, different considerations apply and a separate licence (national/International) must be obtained by someone wishing to operate in the road passenger subsector. However, many of the technical regulations such as those relating to weights, speeds, lighting and rear and side markings are equally applicable to both road haulage and road passenger transport.

Much of the legislation on the road transport sector has been detailed in the FORCE report on Training in the Road Freight Transport sector. In summary, Community measures to protect and promote the interests of workers cover three basic areas, under which the key areas of direct interest to the road transport sector are:

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(a) The Establishment of Social Dialogue and Collective Negotiations

In this area, one of the key actions has been the creation of the Parity committees. These committees represent a forum in which worker representatives and employer organisations can discuss issues between themselves and with the Commission.

In the road transport sector, Commission Decision 516/85 of November 18, and its subsequent alterations instituted the **Parity Committee for Road Transport.** This Parity Committee has had an important role in the development of the common transport policy, specifically as it applies to the road transport sector.

(b) Measures Relating to Access to Different Professions and Vocational Training

With a view to facilitating competition and to allowing workers to benefit from the opportunities of working in different Member States, measures have been agreed that guarantee the mutual recognition of qualifications by the national authorities of the Member States. Additionally, minimum standards have been established to guarantee that persons/entities supplying transport services are sufficiently qualified to carry out this activity.

In the road transport sector, the following Council Directives represent the key legislation in this area:

Council Directive 561/74 of November 12 and its subsequent alterations relative to access to the profession of road transport of goods in the national and international domain.

Council Directive 562/74 of November 12 and its subsequent alterations relative to access to the profession of road transport of passengers in the national and international domain.

Council Directive 796/77 of December 12 and its subsequent alterations relative to the mutual recognition of diplomas, certificates and other titles in the road transport of goods and passengers. This legislation also includes measures destined to facilitate the freedom of establishment of transport companies throughout the Member States.

(c) Actions Related to Working Conditions

Member States have approved various measures relating to working conditions in the road transport sector, namely in the areas of the minimum salary of drivers, maximum driving hours, compulsory breaks and minimum periods of rest. These and other areas of the working conditions in the road transport sector are embodied in the following legislation:

Council Regulation 3820/85 of December 20 and its subsequent alterations relative to the harmonisation of specific matters in the road transport dominion;

Council Regulation 3821/85 of December 20 and its subsequent alterations relative to the introduction of control equipment in the road transport sector.

Council Directive of November 23 and its subsequent alterations on the standardised proceedings for the control of the execution of Council Regulation 3820/85.

Commission Regulation 3314/90 of November 16 and Commission Regulation 3688/92 of December 21 that provide technical updates to Council Regulation 3821/85.

3.2 EMPLOYMENT TRENDS

Statistics on employment in road passenger transport have to be used with care. Existing statistics differ in the definitions used, for example:

- sometimes the figures refer to total road passenger transport (including tram and taxi-transport), while in other cases more disaggregated figures for only bus/coach transport are available
- sometimes the figures refer to employees and in other cases to total employment (including independent workers)
- separate statistics for private and public bus/coach transport are only available for a few countries.

Figure 3.1 overleaf gives an overview of existing statistics for total employment. Some information is given for the definitions used. The last column translates the figures into proportions of total employment in the total economy As the definitions used differ between countries, the figures should be used with care for inter-country comparisons (unless the definitions are comparable), but they do give an indication how important the sector is terms of employment.

When a more strict definition is used (excluding taxi transport), the proportion of total bus transport (public and private) in total employment roughly varies between 0.5 and 0.7% of total employment. When taxis are included, this proportion is between 0.7% and 0.9%. So a rough estimation of the proportion of bus transport is about 0.6%, which means more than 800 thousand workers if this proportion is used for the whole of the EU (12 countries).

In three countries (Netherlands, Germany and Luxembourg) we have specific information on private passenger companies in comparison with total road passenger transport. Private bus/coach companies comprise only a limited proportion of the total road passenger transport (roughly about 20%).

In the European report on the road freight transport sector, we have seen that total employment in road freight transport has grown strongly in the past. This is not the case for the bus/coach companies. Time series are available for Portugal, Belgium, Germany, the Netherlands, France and the United Kingdom. In half of these countries (France, Germany, Netherlands) total employment has grown, while in the other half the opposite has occurred.

Figure 3.1 Employment in road passenger transport in some EU-countries, 1992

	Employment in private bus transport (thousands)	*Total employment in (private+ public) bus transport (thousands)*	*Definition of total employment, year*	*Proportion of column 3 in total employment*
Belgium		21	including trams, 1992	0.56%
France		204	including trams, taxis, 1992	0.93%
Germany (incl. former GDR)	49	253	including trams, taxis, 1992	0.69%
Ireland	7			
Luxembourg	0.3	1	including trams, taxis, 1993	0.79%
Netherlands	7	33	Including trams, 1992	0.51%
Portugal		18	including trams, 1989	0.67%
UK		148	1992	0.58%

Sources:: STATEC (Luxembourg), Verkehr in Zahlen (Germany), OEST-INSEE (France), CBS (Netherlands). Other countries: national reports. Eurostat (Labour force survey) for employment figures of the total economy.

3.3 RECRUITMENT PRACTICES AND EDUCATION LEVEL OF ENTRANTS

The UK sectoral report identifies difficulties that are facing the industry in relation to recruitment. It is apparently a struggle to get good calibre drivers. With the recovery of the UK economy the shortage of good calibre drivers is reaching levels which are causing concern. Particularly in the bus and coach sector, shift working and assaults on drivers are making the industry less attractive and make it difficult to find quality recruits.

The French national report notes that the driving licence is still the essential requirement for companies looking to recruit. However, additional criteria are becoming more popular because of the changes in the industry. Social skills such as friendliness, the ability to adapt to new environments and to deal with awkward situations and to handle customers are now considerations. Employers are therefore beginning to be more discriminating in their choice of employees.

Both of these issues have implications for training. The lack of good quality drivers measn that companies will need to undertake a certain amount of the required training themselves. They will also have to support the training of drivers by social bodies. This will enable those drivers who are available for employment to have a chance of being recruited and will also provide them with access to good calibre drivers when they need them. Moreover the transport companies will have to be more proactive to ensure that the contents of training programmes are adequate.

Recruitment conditions are essentially related to initial training, rather than CVT, and the performance of the industry. Improvements in initial training will provide a better stock of potential recruits and will have a positive impact on the level and type of CVT required in the first few years of employment.

From the national reports it would appear that existing employees may need to undergo basic CVT just to adjust to the high level of change which has occured in the industry in the last few years. This CVT will also help them to work to the same standards as new recruits appearing who have had the benefit of the more sophisticated training programs which have come on stream in recent years (discussed below). A subsequent programme of CVT may then be undertaken to ensure that employees are as familiar as possible with the latest technologies and approaches to business in the passenger transport sector.

Developments in Training

Until recently, initial training in many countries has centred on the achievement of driving licences or general transport certificates/diplomas/degrees. This has changed since around the mid-eighties with the arrival of more specialised courses - for example the Bus and Coach sector NVQs in the UK, and the range of courses which covers logistics and special transport subjects as outlined in the French report.

3.4 PRODUCTIVITY

Productivity is normally measured by dividing production by employment. For the purposes of this study, production could be expressed in passenger-kilometres as referred to in Section 2.1. The advantage of using this production variable is that figures for total employment are given.

However, as elaborated in Section 3.1, these employment figures are really not comparable between countries. Sometimes the data refer to total employment while other times it refers only to employees. In addition, trams and taxis are included in some cases and not in others. For this reason productivity comparisons between countries cannot be presented in this report. There would be fairly significant differences in productivity figures which would be caused to a greater or lesser extent by the sector definitions that were used in the supporting data.

3.5 DEMOGRAPHICS

The proportion of female workers in the bus and coach sector is small (Figure 3.2). This proportion varies between 5% and 20%. However, this proportion is higher compared to the professional road haulage sector in the same countries. The Irish report also showed that there is no increase in the proportion of female workers since 1986 in that country.

Figure 3.2 The proportion of female workers in bus/coach transport

Country	Proportion of females
Belgium	9% a) or 16.4% (b)
Ireland	9%
Germany	13% (drivers)
Greece	5% (estimation)
Netherlands	20% a)

a) Including trams
b) Coach transport

For a few countries, there is some information on the occupational composition of employment in the sector. The occupation of driver appears by far the most important occupation in the sector, covering 50-65% of total employment.

The German report indicated that the employment of women was mainly in part-time work where they are beiing employed to an increasing extent. There appears to be an obstacle to the employment of women as drivers as many people believe that the technicalities of driving may not be as suitable for women. In addition, in Germany there is a law which prohibits the employment of women as drivers from the third month of pregnancy.

The German report also states that working conditions for employees in the private bus industry are strongly affected by the seasonal nature of the work (i.e. tourism). This creates a strong supply of part-time work. Some of the unions have claimed that these part-time workers should be sufficiently qualified and be included in collective agreements. They are also against the unnecessary use of part-time work and wish to provide for restrictions within collective agreements. Some of the bigger companies interested in quality standards have been happy to make additions such as these to their collective agreements.

3.6 WORKING CONDITIONS

Section 3.1 has already discussed the EU regulations which relate to the working conditions of drivers

The UK report states that there was a reduction of driver's wages in the bus and coach sector, of 20% on average since deregulation, which contributed to high levels of turnover, althought the recent recession did reduce that trend.

The German report mentions that, in that country at least, the average age of driving personnel in the private bus industry appears to be increasing. This has implications for managing drivers who are not able to cope too well with stress. Therefore in companies which provide both regular and unscheduled transport, those drivers may be deployed only in the regular transport of passengers where there is apparently less stress. As some drivers get older, if this option is not available to them they may have to retire early. They would possibly then work on a seasonal basis. No figures were available for premature retirement of drivers but a high rate was suggested by the industry experts. Another suggestion for dealing with driver stress was the roatation of drivers and travel guide jobs. One of the trade unions is very supportive of such an idea.

For a truly meaningful assessment of both the demographic trends and the working conditions of the road passenger transport sector it is necessary that statistics are collected from each country in a comparable format.

3.7 THE ROLE OF THE SOCIAL PARTNERS

The Greek report stated that there is currently no action in that country by owner associations or employee unions in the domain of vocational training. Any efforts in this area have resulted from legislative pressure (directives 74/561, 74/562, legislation on dangerous goods etc) or were the result of initiatives by managers of large multinational companies. Neither is there any provision for CVT in the collective agreements between the owner federations and employees.

In contrast, in the UK there is a high level of participation by social partners in the development of training and training standards. The Government there has promoted a training system which operates at three levels: national, local and sectoral. At a national level various Government departments are involved and there are National Education and Training Targets (NETT). The progress under NETT is monitored by a national advisory council which works in conjunction with other employer organisations. At a local level, there are networks of Training and Enterprise Councils or Local Enterprise Councils. The focus of these is on meeting labour market needs. And at the sectoral level there are Industry Lead Bodies (ILB) which are responsible for the development of employment led standards of occupational competence and the implementaion of the NVQ framework as discussed in Section 4.1 Initial Training. The ILB for the passenger transport sector is Bus and Coach Training and is also the Industry Training Organisation.

The social partners in other European countries are also very active through highly consultative models - for example in France, Belgium and Germany. These countries have well developed roles for the social partners within the transport sector and this filters through into the passenger transport subsector.

In Belgium, the Federation of Belgian Bus and Coach Operators (FBAA) is the most important employer's union and on the employee side there is the BTB (Belgian Transport Worker's Union), the CVD (Christian Federation of Transport Workers and Diamond Processors) and the CCOD (Christian Public Services Federation). These form part of the Joint Committee on Transport which is the main consultative body and which concludes the collective labour agreements (CAO) and manages the social funds. The social funds are involved in enabling training to take place and representatives provide advice on the composition of the programme and the selection of the candidates. The social fund is financed by a contribution from the employers of 4.5% of the gross total wages in passenger transport.

In France there is a new system, due to be implemented in 1995, whereby training will be financed from a pool of resources collected by officially approved joint co-operative bodies (OPCA's). An agreement was signed to this effect by social partners of the transport industry creating an OPCA for the collection and management of alternating and continuing training funds contributed by companies with less than 10 employees.

The German sectoral report states that the degree of organisation of the employees and employers in the private bus industry varies strongly. It reportedly amounts to more than 50% in large companies but is considerably less in medium and small sized companies. Collective bargaining plays a major role in determining collective agreements and way in which transport services are supplied e.g. in terms of working hours, minimum age limits and training requirements.

4 - TRAINING IN THE ROAD PASSENGER TRANSPORT SECTOR

4.1 INITIAL TRAINING

Initial training for the road passenger transport sector is normally organised at a national level and three main levels of training are discernible. The first, most basic, level is usually undertaken during the latter part of school years. These courses can be continued after school, into the second level of training, where the students can specialise in certain areas or just gain more in-depth training. Students are often provided with work experience as part of their training

The European Community reacted to the changing demands made on road transport workers and professionals by passing new laws aimed at harmonising access to the sector across the Member States. In 1989, Directives 74/561 and 74/562 (concerning access to the profession of road transport of goods and passengers in the national and international domain) were modified by Directive 89/438. This Directive brought profound changes to the system of initial vocational training for road transport workers. The establishment of minimum requirements for access to the profession contributed in the late eighties, early nineties, to the restructuring of the vocational education system for the road transport sector in those countries where this type of education had not yet been developed.

The National Reports indicate that the type of courses on offer in this area differs from country to country according to the tradition of vocational training in road transport and each country's basic education. In France and the Netherlands, vocational training is already very advanced. Even though several schools, institutes and private entities already provided training there, changes have been made - particularly in terms of quality and contents.

The French initial training system is well developed and Figure 4.1 overleaf illustrates the educational streams for transport, logistics and tourism training schemes in that country. It can be seen that even in such a well developed educational system as France there are few courses that are specifically dedicated to passenger transport. Transport degrees and diplomas tend to be general in their focus with perhaps a few modules within the course set aside for passenger transport.

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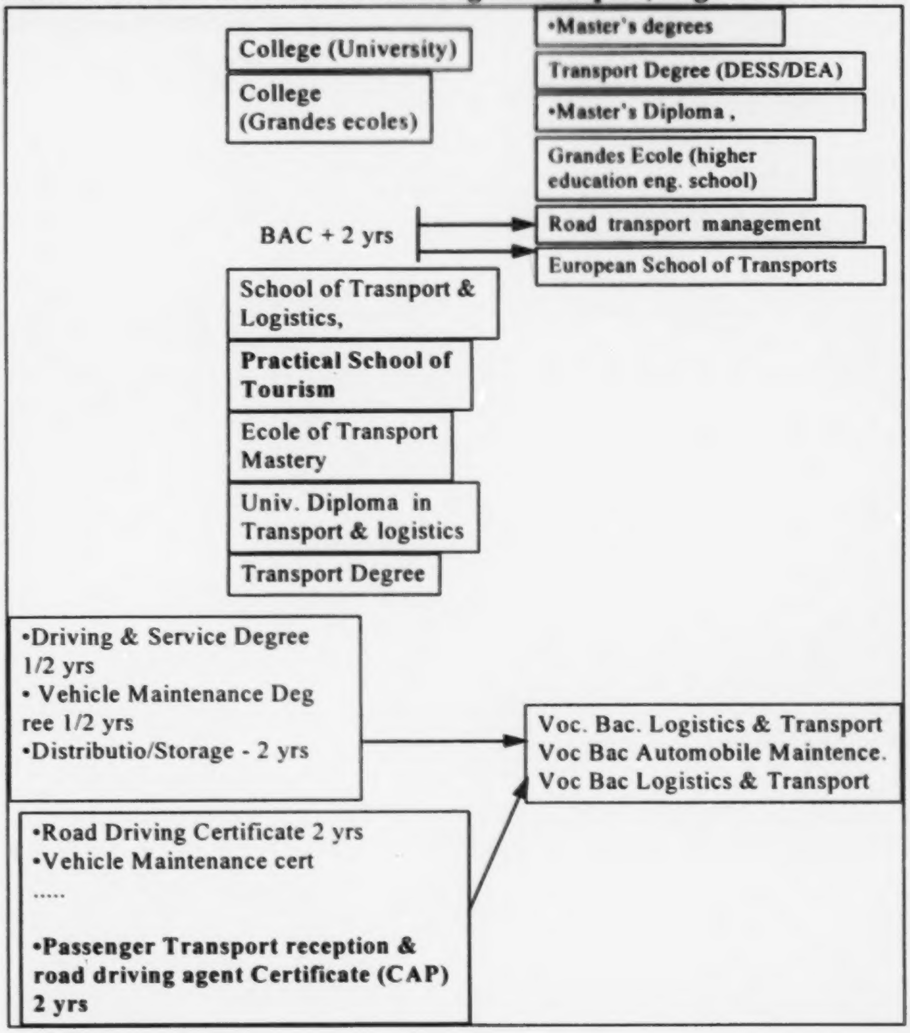
Figure 4.1
Academic Streams in France for training in Transport, Logistics & Tourism *


College (University)
College (Grandes ecoles)
•Master's degrees
Transport Degree (DESS/DEA)
•Master's Diploma ,
Grandes Ecole (higher education eng. school)
BAC + 2 yrs
Road transport management
European School of Transports
School of Trasnport & Logistics,
Practical School of Tourism
Ecole of Transport Mastery
Univ. Diploma in Transport & logistics
Transport Degree
•Driving & Service Degree 1/2 yrs
• Vehicle Maintenance Degree 1/2 yrs
•Distributio/Storage - 2 yrs
Voc. Bac. Logistics & Transport
Voc Bac Automobile Maintence.
Voc Bac Logistics & Transport
•Road Driving Certificate 2 yrs
•Vehicle Maintenance cert
.....
•Passenger Transport reception & road driving agent Certificate (CAP) 2 yrs

* Adapted from the French National Sectoral Report for this FORCE survey. Primary Source: Guide Bleu - Filiéres de formation transport, logistique, tourisme - 1995 - AFT-IFTIM

The newly devised UK and Scottish National Vocational Qualifications system provides a good example of how a separate set of training courses for the bus and coach sector (see Figure 4.2 below) can be developed. These courses were developed when the overal N/SVQ system was being designed for Transport in general.

Figure 4.2

UK National Vocational Qualifications (NVQ) in the Bus and Coach Sector

Area of Competence	**N/SVQ Level**
Bus & Coach Driving Instruction	3
Bus & Coach Driving and Customer Care	2
Maintaining PCVs (Body Trades)	1,2 & 3
Maintaining PCVs (Electrical)	1,2 & 3
Maintaining PCVs (Mechanical)	1,2 & 3
Vehicle Mechanical & Electronic Systems - Unit Replacement (light vehicles)	2
Vehicle Mechanical & Electronic Systems Maintenance & Repair (light vehicles)	3
Vehicle Mechanical & Electronic Systems Maintenance & Repair (Heavy Vehicles)	3
Vehicle Body Fitting	2
Vehicle Body Repair	3
Vehicle Body Refinishing	3

Access to the profession

To become an operator in the general road transport sector, it is necessary to reach the level of competence according to the community directives mentioned above.

In all countries a dense network of private driving schools exists providing practical driver training for the goods and passenger driver's licence. These mandatory courses differ from country to country according to the type of transport service provided, e.g. goods, dangerous goods and passengers. For example, in Germany, in order to receive a licence to drive public transport vehicles, vocational training is given by a technical control board from some private institutes.

Funding

In countries where the tradition in road transport training is more advanced, the employees and employers contribute with a small percentage of the wage bill (levy) to obtain training, eg. in the Netherlands a collective agreement was made for private bus or coach transport which sets aside funds for schooling. From 1 January 1992 the premium has amounted to 0.9% of the assessable wage under the Unemployment Act. 0.16% is used for soem defined schooling purposes, such as the CCV-B examinations for passenger transport and an apprentice scheme for coach drivers.

At a vocational education level it is possible to say that, according to each community member's background in the road transport sector, there are several kinds of promoters. Some private institutes, social partners, professional associations and, of course, the state itself, all contribute to providing vocational training courses.

Recruitment conditions

It would appear that many companies in the private transport sector are family-run. As a consequence, the recruitment conditions follow some patterns that do not fit with the present standards of initial training and do not represent a healthy procedure for the transport sector. However, the passenger trasnprot sector is primarily public sector driven and as a result they would have their own rigorous induction programmes which would allow them to recruit people who have only basic educational qualifications.

Employees for the road passenger transport sector may also be recruited from training courses which are related more closely to tourism in general. So the administration and planning staff may have specialised in languages, geographical markets, tourist attractions and development of tour packages.

As stated in the road freight transport report, in countries like Greece, Portugal and Ireland the recruitment of drivers is at times a result of their family connections. In other countries such as Luxembourg and the United Kingdom, experience is the condition required for the employment of new drivers.

Conclusions

From the analysis of the various National Reports we can conclude that there are some countries with a greater tradition for initial training in the Road Transport Sector (eg. France and Netherlands). In these countries changes have been made to improve and diversify the range of subjects available, in order to satisfy the new needs of the sector Well developed initial training is seen as an important factor in the development of the road passenger transport sector.

Those countries with less of a tradition for vocational training in Road Transport (for example, Portugal) are making greater efforts to improve their levels of standards and to increase and diversify the supply of initial training. It seems that in the last years they have started looking to initial training as a prerequisite for survival in the European market.

Many of the road *freight* transport training courses would be taken by those wanting to enter the *passenger* transport sector as there is an overlap of required skills. However, it is clear from the national reports that there are more and more training courses being developed specifically for passenger transport employees.

Future courses for employees in road passenger transport could provide a more integrated curriculum so that, for example, those who are training to be bus drivers can also appreciate the role of the other employees in the company. Many of the courses which are currently available for bus and coach drivers appear to be fairly narrowly focused on the driving skills, first aid and knowledge of driving regulations.

Passenger transport for non-regular services, in particular tourist transport, often requires more well developed courses. The national reports pointed to a need for more training - especially in customer relations, route and geographical market knowledge, technology applications and languages. It appears from the reports that it is continuous training which tends to make courses on these subjects available to employees who need training in a selected area.

4.2 CVT ACROSS EUROPE

As mentioned in Section 4.1 on Initial Training the road passenger transport sector across Europe is primarily driven by the public sector as national, municipal and local authority run services for:

- regular public bus transport
- regular private transport (eg school pupils, company workers)

- regular or on-request coach tours

Sometimes, the regular public transport is sub-contracted to local private bus operators in particular geographical areas and of course, many private operators also operate in the latter two areas of business. However, because the sector is public service driven, the employees have to go through rigorous training programmes. The public companies are so big that training becomes more difficult and the need for formal courses is even greater than in tha comparably small private companies. In addition the public companies have close ties with the industry organisations and can afford to develop well structured CVT programmes.

Some private bus operators can result from public sector employees setting up on their own and these people will then have benefited from the training that they received in their former company. However it is up to them to continue a training programme for themselves and their new employees. They could use their experience gained in the public sector to design CVT schemes but it is not clear how many people do that.

4.3 TRAINING BUDGETS AND COSTS

This issue has been examined in depth in the road freight transport study. However, in that report the authors made it clear that there was insufficient data to make any real conclusions about the costs of training or about the typical process of budgeting that is undertaken by companies. Difficulties arise mainly due to a lack of information and even where there is information it is not comparable. So many of the companies undertake training on an ad-hoc basis or they do not treat training as a separately identifiable expens. In addition, many companies were either unwilling or unable to give the data that was required for generating any meaningful conclusions.

The road freight transport report recommends undertaking a study to examine the economic return of company training in road transport. A framework for calculating the return was include in Appendix I of the report and it is also include in Appendix I of this report.

4.4 FUTURE TRAINING REQUIREMENTS

The identification of requirements for passenger transport employeeshas been the relatively easy part of the study, with all reports offering similar or complementary ideas. However, it is the development of procedures and structures to enable the training to take place which may be more difficult, particularly when the decisions in relation to funding have to be made.

Training requirements that have been identified tend to follow on from the areas where the passenger transport sector is experiencing the greatest change (as per Section 2.2 Forces of Change). Principal requirements relate to:

Technology Developments:

The introduction of new vehicle technology and new communications systems has implications for drivers and office managers. If the company wishes to capitalise on the advantages which can be offered by these developments then a certain amount of training for existing staff must be implemented. For a company that wishes to use technology to gain competitive advantage (like the French case study company SAEMT2C) a programme of genuinely continuous vocational training needs to be planned as new types of vehicles and office equipment will be purchased relatively regularly.

Quality Standards and Customer Service:

Developing and maintaining standards of service quality in passenger transport companies requires all employees to understand the theory behind quality programmes. They also need to be trained in the new quality management procedures which will be implemented in their companies. ISO 9000 for example often requires mployees to change the way in which they do things and to record the work that they are carrying out in such a way as to make all operations as transparent as possible.

Improvements in customer service are often undertaken in conjunction with quality programmes, although customer care has a broader focus and requires the employee to adjust his or her whole approach to work and to the customer. In passenger transport this has greater implications than it does in freight transport as the customer is physically on the vehicle for the whole of the journey as well as wanting the vehicle to depart and arrive on schedule. With the growth of competition in the bus and coach sector, it has become increasingly important for companies to build strong relationships with their customers who are becoming more and more demanding.

Drivers are being expected to know details of timetables, be familiar with tourist information about the local area, speak more than one language and to provide a positive image for the coach or bus company for which he or she is working. The role of the driver is therefore changing and training of drivers therefore needs to take this into consideration - both at the initial training stage and through CVT.

Companies who are using their level of customer service to gain competitive advantage often set up special programmes. These may cover areas such as customer-satisfaction tracking, relationship management, Just-In-Time deliveries and real-time communications with customers. Many employees will not have experience of these unless they have worked in a similar environment elsewhere. Even those who have gained experience elsewhere will need training as each company needs to tailor their customer service to meet their own particular circumstances.

Safety Standards:

Both passengers and the European Commission are becoming increasingly concerned about the safety records of transport companies in such a compeittive environment. The national sectoral reports and case studies pointed to the need for drivers to be trained in the various aspects of preventive driving. This would help to reduce driver fatigue and would help drivers to cope more effectively with dangerous situations.

Forward Planning:

The Netherlands national report identified the need for companies to be more proactive in their training practices. As the requirements for training emerge it will be more important for companies to plan ahead and in doing so choose the most effective and efficient modes of training. The report for the road freight transport sector goes one step further than this and recommends that companies carefully and regularly examine their training needs before planning any training. Planning of training then should be done in conjunction with local or national training bodies and ideally needs to be driven from a top management level so that it is more effective.

5 - CVT CASE STUDIES

The report on CVT in the road freight transport sector identified a set of characteristics which were common to many of the exemplar CVT case studies. Some of these characteristics are less relevant for passenger transport companies as, although they operate in the same sector (road transport), they serve a market segment which has many unique characteristics. The main difference is that the customer (the passenger) has to be served throughout the duration of the journey whereas with freight transport the driver is on his own between the departure and arrival points. The idea of customer service therefore takes on an extra dimension in passenger transport.

However, by adapting the list of characteristics in the freight transport report to account for the differences we still have a set of useful ideas for planning and implementing CVT. As there are only relatively few passenger transport cases in this survey it is useful to draw from the freight transport report as well. Some of the examples below therefore are from road transport companies.

Readers may be interested in specific characteristics and should refer to the individual case study reports for further information and additionally to the relevant sectoral report if necessary.

5.1 CHARACTERISTICS OF EXEMPLAR CVT CASES

Figure 5.1 below provides a summary of the characteristics of companies who appear to have innovative and successful CVT.

Figure 5.1

Characteristics of Innovative & Successful CVT in Companies

⇒ *Assessment of training needs*

⇒ *CVT based on corporate objectives*

⇒ *Innovative methods of delivering training*

⇒ *Highly developed CVT delivery*

⇒ *Close links with training bodies, industry groups & equipment manufacturers*

⇒ *Co-Operation between smaller companies*

⇒ *Highly focused CVT; identified employee target groups*

⇒ *CVT focused on customer needs*

⇒ *Initial and continuous training linked together*

⇒ *Commitment to service quality included in training*

Assessment of training needs & CVT based on corporate objectives

In the road freight survey, relatively few of the companies surveyed had formal procedures for assessment of training needs. The smaller companies felt that they knew their staff well enough to make informal assessments. The larger companies were the ones who tended to have regular and formal assessments - ranging from meetings with staff to obtain information from the bottom up, to identification of needs as matched against annual targets and objectives.

The latter tended to be undertaken by exemplar companies and training policy was consequently linked to high level objectives and company strategy. Training needs are assessed on the basis of whether the targets and strategies could be realised with existing staff capabilities. This also means that training effectiveness can be analysed on the basis of whether targets are achieved. For example, some of the exemplar case studies illustrated a reduction in traffic accidents (and significant costs) which could be clearly linked to training of staff in preventive driving techniques.

Interestingly, one of the road freight tansporters, Trans-o-flex in Germany, undertook a series of staff group discussions whereby staff decided what sort of skills they needed to have for their jobs. However, the central works council considers that it did not lead to any significant change in CVT content or in participant groups. Other companies hold regular staff meetings and find that skill deficiencies are often identified at these meetings even though it is by no means the purpose of the staff meeting to assess training needs. Similarly, many companies use their annual staff reviews to identify skill needs. The Lane Group in the UK has annual assessments and also assesses skill needs when a new contract is won. Each employee is given Key Performance Indicators which are then analysed in open discussion and reveal where areas of training are required. In the UK the Investors in People scheme, which is profiled in the UK sectoral report has led to a greater focus on individual employee needs.

Whatever the actual method of needs assessment undertaken, it becomes clear from reading the case study reports that CVT is more successful if:

- training plans are developed on the basis of corporate objectives,
- a member of the Board of Directors or first line manager is appointed to ensure training is carried out.

These two conditions mean that needs assessment will be guided by company objectives and consequently cost-benefit analyses will be facilitated afterwards. Greater staff enthusiasm for training will result when the goal is clear and the results can show that the goal has been achieved with the help of CVT.

The French road passenger case studies show a considerable attention to the assessment of the training needs so that they can design relevant training plans or select relevant courses.

Case Examples: ***Assessment of Training Needs - SAEM T2C, SETRAP, (France)***

SAEM T2C: each year T2C prepares a training plan for the entire staff. It is an "open" plan which takes into account personnel's wishes as well as company requirements. Each head of department or workshop has to collect employee's requests and to make suggestions that combine staff's expectations and the company's actual needs. Proposals are summarised by a management committee and submitted for approval to employees' representatives.

SETRAP: the vocational training policy of SETRAP is aimed clearly at two distinct target groups ie non-moving staff and moving staff. Trainees are asked to state their needs and to express the difficulties they come across in their working life. On the basis of this informal consultation system the management decides who will attend a proficiency course. Moving staff are required to attend three different courses at least in the areas of safety, languages and mechanics. The non-moving staff are not automatically offered training but a selection of them have undergone training suitable to their own situations.

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Innovative methods of delivering training

One of the main purposes of this FORCE survey was to identify innovative forms of CVT. Before describing some of the methods used it is interesting to note the typical size of exemplar companies who presented innovative techniques. Many of these companies were relatively large in size (e.g. a Passenger Transport Group in the U.K). The larger companies can afford to experiment with training techniques and can work with training bodies to pioneer new training methods. Often they work on developing training to suit their particular type of transport or goods carried and in doing so develop a new technique which could be easily transferred to other companies. The smaller companies are not excluded from innovative CVT but often cannot spare the time for experimenting with training techniques. In addition, they tend not to utilise high tech training or any expensive methods as they have only a small base across which to spread their costs. This is where the training bodies, industry groups and equipment manufacturers have a role in helping the small companies to develop. Many small companies utilise these entities to stay close to developments in training and to ease the cost of equipment and trainers.

The typical exemplar company has moved from just training staff in-house with lectures, handouts and slides to training in modules which are designed where possible to be delivered while the driver is on the move, resting or at home. New methods are developed with a view to increasing both the efficiency and effectiveness of the training. Distance learning now means that not all trainees have to travel to a central point to receive CVT. Interactive videos and CD-ROM programmes, books and audio cassettes are utilised by the exemplar companies. One company brings staff together for training but utilises role playing rather than the traditional lecture based approach. Many of the companies who found their CVT successful trained their own trainers and then let each trainer spend at least a day with individual employees so that skill deficiencies could be addressed and various needs discussed with the employee at the same time. In this way the training was very closely linked to the realities of the employee's worklife.

The UK case, **A Passenger Transport Group**, was able to point to the effectiveness of a multi-media approach to training:

> *"Originally it was postulated that each hour of competency based training and interactive video programme material was equivalent to four hours of traditional class contact. Evaluation of the programmes shows this early estimate to be low and that the equivalent rate is closer to seven to one. In other words, evaluation of the practical results of a multimedia programme suggests that a whole days traditional training can be achieved and knowledge and skill retained at an equivalent or higher level in just one hour."*

The company points to the high costs of the development and operation of a multi-media approach but highlights that units costs of delivery are significantly lowered - In this case the company can spread the annual Stg£2.4 million cost over its 6,000 employees (this includes development as well as delivery costs). Smaller companies would certainly need to access the multi-media tools though a training body or industry group.

The exemplar companies which have been identified in terms of innovative training are listed in the case examples below against their particular type of innovative equipment or technique.

Case Examples: Companies using innovative training techniques

Passenger Transport Group (UK): Provides an interesting example of the use of multi-media. Programme material is held on CD-ROM and uses touch screen to avoid any keyboard related problems. Audio instructions are available in four languages. Interactive video, case studies, workbooks and on-the-job exercises are also used.

SAEM T2C (FRANCE): This company uses role-playing to teach communication techniques to drivers who may be faced with difficult situations. Video cameras are also utilised to help with group discussions.

Highly developed CVT delivery

In the road freight survey, some companies presented CVT whereby the participants learnt new techniques such as data processing, computerised logistics procedures or driving skills, all of which could be considered as the actual tools that are required to operate the company. Others presented CVT which focused on employees having a customer oriented approach, on instilling a certain corporate culture or perhaps on quality of service. Such training themes could be considered to focus on the employee's understanding and attitude which is required to make the operations of the company flow smoothly and successfully. In the exemplar companies it has been noticed that a combination of both types of training is undertaken. It tends to be larger companies which will undertake both. Small companies typically state that they can only afford to do one type or the other and often say that the software training can be done informally because there are only a few staff.

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Case Example: Highly developed CVT delivery - Kuhne & Nagel (Germany)

This case illustrates how training can be developed to incorporate both the practical tools required for everyday work and the approach and attitudes of employees which affects the long term operations and customer relations of the company. The case study report presents a set of Human Resource Development Seminars which covers eight years of training. The aim is:

"to improve participants' social skills (communicative ability, flexibility and sympathetic understanding) and methodological skills (work organisation, delegation and time management)....Parallel to these seminars is a central on-the-job CVT programme comprising all functional fields - marketing and sales, EDP, financial management and control."

Close links with training bodies, industry groups and equipment manufacturers

Exemplar companies have tended to maintain close links with training bodies, industry groups and equipment manufacturers. This has facilitated:

- savings on development costs
- training of trainers so that new training techniques could be disseminated quickly
- sharing of ideas to achieve common goals such as the reduction of accidents
- small companies to avail of training which they could not afford to undertake alone
- companies to stay at the cutting edge of road transport developments on a national and international basis
- the development of agreed industry standards.

A prime exemplar for achieving successful CVT through maintaining close relations with training organisations is the freight transporter Transportes Rodoviarios de Mercadorias Luis Simoes in Portugal. This company is closely aligned with the Institute of Transport, the National Association of Professionals of Road Transport of Goods, European Co-Operation programmes, the universities and vocational schools. It states that this leads to more meaningful training being provided and that the Company can influence the training courses being offered to students in the universities, colleges and industry training schools. The Company likes to identify external experts in the road transport sector who can share their expertise with selected personnel who in turn will train the rest of the firm.

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Some of the smaller companies who would otherwise not have had formal training programmes have linked up with customers and equipment suppliers. Examples include: Transports Baonville in Belgium which undertakes training courses through the UPTR (Road Transport Professional Union) and has a training contract with its vehicle supplier; Eschilos of Greece which trains its drivers through courses organised and paid for by its key customer (Shell); Adams Transport in Denmark which has both internal and external training courses, including participation by the Company in a training development project which has been initiated by private and public training institutions and consultants and private companies from three industries. The aim of the latter course is to design public training courses to match the present and future needs of private companies and also to enable a systematic evaluation of training effectiveness.

The Dutch case studies all show close co-operation with training bodies and industry groups and the sectoral report illustrates clearly how such close bonds are developed with the companies. The country has a tradition of utilising training levies and also of involving employers and training institutes from an early stage through an apprentice training scheme.

Case Example: Close links with training bodies - KM-ReisenGmbH (Germany)

For its drivers KM-Reisen makes use of the WBO employer's association's training institute. Plans for the future also involve using the WBO facilities and trying to influence the institute in the development of new courses. The manager feels that new courses are required in the fields of quality management and safety. Moreover as safety courses are currently mainly attended by coach drivers he feeels that they are equally important for regular public transport drivers...

...All coach drivers in KM-Reisen have participated in WBO safety training. They were also offered in-house video based training for bus drivers held by a WBO trainer. Some of the videos were used for self-learning at home. KM-Reisen has also "trained a trainer" at WBO and the company intends to utilise him regualry in the future for in-house training.

Co-Operation between smaller companies

The smaller road transport companies can often not afford to invest large sums in continued training of staff. They do not have the funds required or enough staff to justify the unit cost of training. This lack of resources is often cited as a major barrier to their getting involved in CVT at all.

However, in the road freight survey some of the case studies had been very successful in getting around this problem by co-operating with other small companies which whom they were not directly competing. Two Dutch cases in particular had grouped together staff from other companies - in many cases the cost is shared by the companies involved although sometimes the lead company is prepared to subsidise other companies' staff if it clear that it will directly benefit them.

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Case example: Co-Operation between smaller companies

A Large Private Passenger Company (UK): this company also trains temporary drivers. This is significant as it is involved with ten other firms from all over the country from which it recruits temporary drivers in peak periods. The company sets great store by providing a constantly high quality of service. The customer must not be aware of the difference between a company driver and a temporary driver.

WBO employer's association (Germany): through the WBO small passenger transport firms share the costs of the development and implementation of many training courses. Companies also share ideas with each other for training.

Highly focused CVT; designated employee target groups

As already mentioned, the exemplar companies tend to have well developed CVT courses, covering training in both practical day-to-day skills and longer term focused training on corporate culture and employee attitudes. Such training therefore is likely to be designed for specific target groups in the company - typical groupings are tour directors, sales and marketing staff, drivers, admin staff, logistics staff, junior management and senior management. The larger companies have developed training courses and materials in various languages. The case study on a **Passenger Transport Group** in the UK is a prime example of this with audio training material which is available in four languages (English, Bengali, Punjabi and Hindi) - reflecting the multi-racial background of its drivers.

Almost all companies have some form of training for their drivers. The exemplars have CVT for segmented employee groups and have designed or adapted the training programmes especially for the individual groups.

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Case Example: ***Highly focused CVT - SADAR (Belgium)***

Ongoing training in SADAR is provided to a range of employee groups:

Admin Staff:

- *accounting*
- *data processing*
- *telephone reception*
- *wages computation*

Mechanic Workshop Personnel:

- *3 days in Germany twice a year to learn the latest developments*

Bus Drivers:

- *a driver starts with a 14 days on-the-job training session*
- *training sessions, lasting a few hours and provided by a local public transport company, are also compulsory*

Management:

- *ISO 9000 certification training course*

CVT focused on customer needs

Some companies operate in a specialised area of passenger transport, such as the transport for sporting holidays, niche geographical areas, certain age groups etc. They may therefore have to focus their training on the use of specialised equipment. Such equipment could include, for example, automatic payments systems, bycicle attachments, communications systems, air conditioning, etc. Similarly, training may need to be tailored to help employees satisfy special customer needs, such as requests for information on the local area, conversation in native languages, preferences particular to certain nationalities or age groups or to disabled passengers.

By paying attention to the specialised niche within which they operate companies make their CVT more meaningful for the employees.

Case Example: CVT focused on customer needs
A Large Passenger Transport Company (Netherlands)

"Coach tour passengers are becoming harder to please. They want to travel in comfort and be waited on hand and foot. That implies new demands on the qualifications of the drivers. They have to be knowledgeable about the trip destination, sights and culture. Most tourists nowadays have quite a bit of travel experience and expect tha coach driver to contribute facts worth knowing. That is true of all companies but in ours the processing of information is nicely streamlined. All travelling programmes are stored in the computer so that a driver can study therelevant travel reports beforehand...They are instructed by the companyon how to use the computerand the necessity to become familiar with this information is impressed upon them."

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Initial and continuous training linked together

Exemplar companies tend to take a long term view when planning training activities. They also tend to segment employees into groups which require particular types of training. New employees are often identified as a separate group who require some form of initial training before they actually start working in the new job. This initial training then sets the employee up for attending continuous training programmes which they may want or be required to attend over the course of their employment.

One freight transport company, the Lane Group in the UK, operates a system whereby new recruits are 'buddied' with a colleague from the same department who will show them the ropes for the first three months. This is followed by a formal induction which involves meeting everyone in the company, getting an introduction to the Company values and to its vision for the year 2000.

SAEM T2C in France also has a training plan which covers 'Familiarisation Training' for newly hired drivers and 'Continued Training' which is offered to all personnel.

By providing initial training programmes especially for new recruits companies are ensuring that their employees are quickly assimilated into the corporate culture. Some companies do not provide such courses - However they would be so closely allied to the local college or vocational school from where they get their recruits that they are effectively influencing the initial training system anyway. However, having a training plan which includes initial training as part of the process indicates that a company has a long term commitment.

A Commitment to service quality

Almost all of the exemplar companies exhibited a commitment to service quality. In many cases this meant that they were involved in ISO 9000. Sometimes they aimed to be 'customer oriented' companies so that service quality would be an integral part of their operations. In fact one or two companies decided not to proceed with ISO 9000 as they found it cumbersome or ineffective - but they did replace it with their own approach to quality. Either way the most progressive companies focused on quality in some way and integrated it into their training programmes as separate modules and/or as a constant theme in all training modules.

Case Example: A Commitment to Service Quality

Lucketts Travel (UK)

Lucketts is very concerned with the quality of service that it provides. They have a Quality of Service statement on their promotional literature which states the following:

"The Company will endeavour to provide the highest possible standard of service and will:

Welcome comments and suggestions form customers, and will respond to these provided a name and address is provided

- *Continue to research customer attitudesand needs, and will respond psitively wherever possible.*
- *Modernise the fleet, financial resources permitting, and where possible introduce features which further imnprove passengers comfort.*
- *Strive to ensure that all company staff are courteous and smart.*
- *Strive to maintain reliability, traffic and weather conditions permitting .*
- *Ensure that all complaints are responded to within five working days and fully investigated. Directors will personally oversee the handling of complaints.*
- *"Mystery Customers" and a panel of regular customers in direct contact with the Directors will regularly monitor and research the Company's performance to ensure that standards are being met.*

5.2 EXEMPLAR CASE STUDIES IDENTIFIED

The report on the road freight transport sector presented a matrix of companies which exhibit particularly strongly one or more of the characteristics discussed in Chapter 5 of that report. Readers were then advised to refer to the relevant case studies if they were particularly interested in any one characteristic. For example, readers wishing to see examples of companies who have formal procedures for assessment of training needs should read the case study reports for Edgar Grass, DHL and the Lane Group. Likewise segmentation of employee groups in particularly evident in SAEM T2C, TDG, the Lane Group and Luis Simoes. Some passenger transport companies were included in that chapter and the matrix.

Figure 5.2 below takes each of the passenger transport companies and indicates its interesting characteristics. Again, readers should refer to the individual case study report for further information.

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Figure 5.2 Interesting CVT Characteristics of Case Study Companies

CASE STUDY COMPANY	INTERESTING CVT CHARACTERISTICS
SAEM T2C (France)	The training is carefully targeted at specific employee groups. Both initial and continuous training is utilised and there is a well developed CVT programme. Role Playing is used for teaching communications techniques.
Setrap (France)	Training is customised to meet the needs of the employees
Assoc Bad Wurten & KM-Reisen (Germany)	Example of how an employer's association provides relevant training to its members. Also shows a company working with the Association.
KTEL of Evros (Greece)	Good use of customers to train employees
A Large Private Passenger Company (Netherlands)	Regular CVT takes place and assessment of needs is well structured. Temporary drivers are also trained and there is a close association with vocational training institutes and private institutes
A Passenger Transport Group (UK)	The CVT is based on corporate objectives and is implemented via multimedia equipment
Lucketts Travel (UK)	Good example of a small company which is growing and using CVT to help achieve its objectives.
Transports SADAR (Belgium)	The Company is closely linked with training associations

6 - CONCLUSIONS AND RECOMMENDATIONS

Comment for Readers

The case study companies in this report provide a look at some interesting forms of CVT. They also show how much support can be gained from training organisations and social partners both in designing and providing CVT. However, due to the small sample size of road passenger case study companies and the emphasis which has been placed on road haulage in the national sectoral reports, it is difficult to draw conclusions and make recommendations that are substantially different to those that would apply to the road freight transport sector. Therefore, when reading this section (and Section 5) it is advisable also to refer to the report on CVT in the road freight transport sector for more detailed explanations. However, the key points of that report are reproduced here where they are most relevant, together with observations which are pertinent to the road passenger transport sector

6.1 CONCLUSIONS AND RECOMMENDATIONS

An average person in the EU travels about 1,000 km per year in a bus/coach. In most countries this is increasing, but the growth is very limited and in some countries its even negative. Overall mobility (especially transport in private cars) is growing faster, which means that the modal split for bus/coach transport is decreasing. When countries are compared, the modal split is highest in the southern European countries.

Total employment in the bus/coach sector is about 0.5 - 0.7% of total employment in the EU-12, which is more than 800 thousand workers. The Driver comprises the main occupational category (more than half of workers). The sector is dominated by men (more than 80%).

The minimal or stagnant level of growth in the transport of passengers by bus or coach has led to increased competition in that transport subsector. This has been compounded by the effects of deregulation which has been taking place across Europe since the late 1980's.

The forces of change in the industry are also making companies adapt their operations, equipment and whole approach to business. The changes were discussed in Section 2.2 of this report and they include: technology and legislative developments, the need for quality management programmes. public expectations and European policies in relation to environmental and safety issues. These changes also put pressure on the employees to upgrade their skills to meet new expectations. The role of CVT becomes more important therefore and its motivational powers come into play.

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Training Benefits from Co-operation

It would appear from the national sectoral reports and the passenger transport case studies that the most effective training programmes result from co-operation between large and small companies, training organisations and social partners.

Many of the large companies need training to be formally structured so as to ensure quality standards are maintained and also to enable the company and its staff to stay at the leading edge of technology (vehicle technology, communications technology, logistics systems etc). By employing experts in the relevant fields, by communicating with training associations and industry groups and also with customers, these large companies can finetune their training programmes which in turn will be developed internally or purchased from/provided by external sources. Formal training programmes and communicaitons with relevant external bodies indicates the need for allocation of responsibility for training to a high level employee. Representation at Board Level or at least at top management would not be unreasonable as training is more successful if it is aimed at achieving corporate objectives. It is also easier to motivate employees to undertake training if they see that it is considered to be important by the leaders of their organisations.

In contrast, small passenger transport companies may not be able to dedicate the time or personnel for the development of training. However, the small case study companies in this survey tended to get around these problems by actively communicating with training organisations and/or employer/ee associations who provided training. Costs are often shared through the deduction of a levy which helps the training organisation to develop courses and then to provide them to groups of employees from various companies. The Greek company KTEL of Evros also benefited from training provided by its key corporate customers.

Small companies should also be aware of the benefits of planning training schedules carefully. Even though they can call on training organisations to provide course when the need arises, it is more advisable for them to be proactive and to develop annual or even longer training plans. This would ensure that they reap the full benefits of continuos training rather than the more temporary benefits of ad-hoc training. It is also easier for them to influence the training organisations to provide highly relevant training if they maintain relationships with them and are aware or training proposals which are being considered.

In turn, the training orgnisations should feed off the transport comapnies to gain ideas. They should also be responsible for researching international best practice in training. By communicating regularly with other training organisations and with the large passenger transport companies they can keep abreast of innovative developments in CVT.

It would appear from our survey that those training organisations which are made up from employer and employee groupings (for example in France, the Netherlands and Belgium). Therefore having the social partners actually involved in the development of training at a national or regional level appears to be very effective. Another apparently good example of the benefits of co-operation between companies, industry groupings and social partenrs is the N/SVQ system in the UK (referred to in Section 4.1) - although the true results of these training courses will only be evident after more time has elapsed.

6.2 A Set of Recommendations For CVT In The Road Passenger Transport Sector

Recommendations for companies which are interested in putting together their own CVT plans can be put together as a result of the case studies and sectoral analyses that were undertaken for this survey.

The recommendations are identified below and summarised on the flowchart in Figure 6.1. While these recommendations are similar to those identified for the road freight sector the implementation of them would be different because of the different nature of the businesses and this is reflected in the additional comments.

Recommendations:

Design CVT plans against strategic objectives and related goals/targets - so that guidelines can be set for choice of CVT themes and programmes through the year/planning period. Coach tour operators who have highly a seasonal business will benefit from this in that they will be prepared for the busy times if training is organised with the peak periods in mind.

Match existing employees skills against the goals and targets - so that skill requirements can be identified and the most relevant skill deficiencies can be addressed. For example the company may wish to improve its level of customer satisfaction - If drivers are not comfortable with the increased demands placed on them by customers then training in communications could be invaluable.

Allocate responsibility for training at a high level in the organisation so that staff are aware of the importance of and commitment to CVT. High level employees are more aware of the corporate objectives and have the power to implement new CVT programmes or to change existing ones.

Select CVT themes and purchase or design CVT programmes. The 'purchase or design' choice will depend on the level of sophistication of your own training facilities. Be sure to **set targets** for the expected results of training. Targets could include, for example, x number of drivers reaching a certain level of fluency in a chosen language, reduction in road accidents by x%, reduction in late customer complaints by x%, 100% utilisation of a new computer system with zero errors, etc.

Investigate distance learning programmes. This allows drivers to learn without significantly disrupting their schedules. Videos, audio tapes and workbooks are typical tools that are used. Distance learning can be supplemented by conclusion or introduction seminars if necessary. 'Help desks' are often required.

Investigate innovative materials and training techniques. These may be suitable for the topic that you want to address. For example, simulator driving machines, interactive videos, role play, case studies and group discussions may be more effective in certain situations.

Be aware of the capabilities of external training organisations and experts - so that unnecessary costs in training development or delivery are avoided. It may be that a training group has developed a programme which is tailored to the needs of road transport companies and that it has already found useful ways of delivering the content with minimal disruption to delivery schedules.

Link up with relevant training entities or other small companies if yours cannot afford to undertake training alone. There are benefits in this in that your staff get to share their knowledge and experience with other companies. You also get to share the costs and you avail of the expert knowledge of the training organisation. The larger road transport companies tend to stay in contact with training entities so that they will reap all of these benefits and smaller companies should have even more incentive because of the cost-sharing benefits.

Ensure close contact with customers so that the CVT can be continuously adapted to their needs. For example, some customers may express dissatisfaction at the manner of delivery staff/drivers and training can help to address this situation. Other customers may wish to have your drivers utilise their computerised stock control system to log deliveries and the drivers would therefore need to be trained to ensure smooth transition to the system.

Evaluate training results against the goals and targets that were originally set. Be prepared to amend CVT immediately if results are disappointing. Highlight successful results to staff if doubts are expressed about the effectiveness of the training and the effort that they have to put into it.

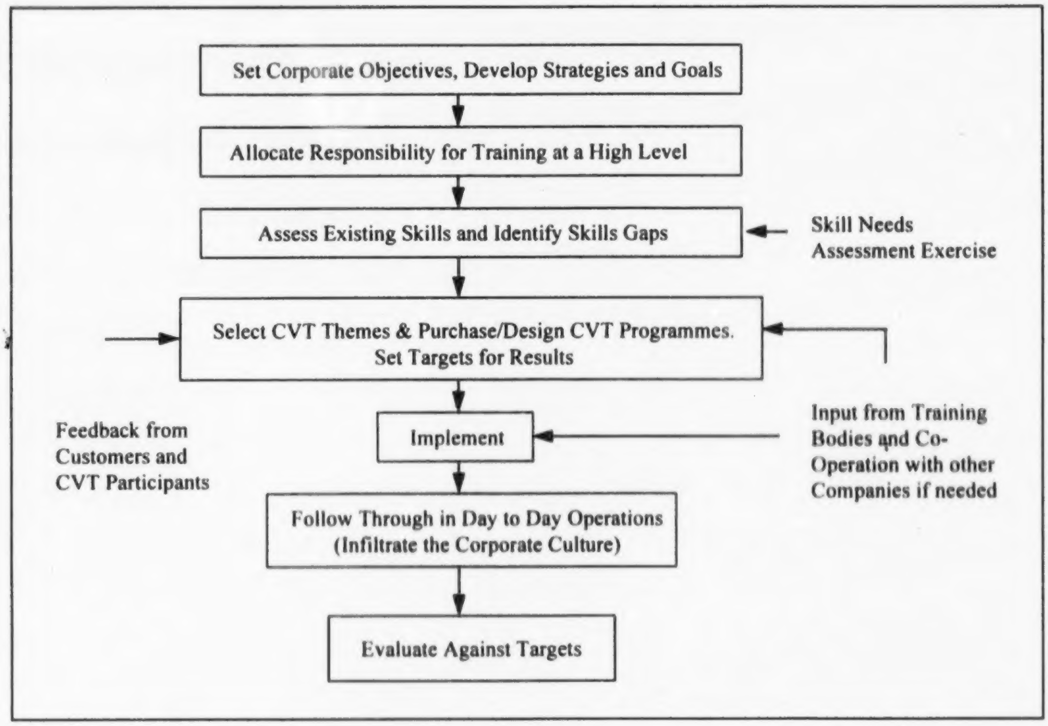
Formalise the procedures for assessment of training needs and gaining feedback from CVT participants. Use the results to amend CVT where necessary.

Infiltrate the corporate culture with themes from the training programmes so that it is a continuous process. For example, quality programmes are continued with standards being set on a regular basis; courses on satisfying the needs of the customer will be more effective if there are few barriers between the employee and the customer; CVT courses on safety are more meaningful if safety records are subsequently published on a regular basis. In addition, reward schemes can be set up after relevant CVT courses so that employees can clearly see the goals and will be more likely to draw on the lessons learnt from the course. Building relationships with the drivers in particular is important as they spend much of their working hours alone and can become isolated from the corporate culture of the company.

Training bodies should follow developments in training techniques and generate a model on which companies could base their training programs. This report is one step towards the development of such a model. Training programs should also take into consideration the business strategies and forces of change in the road transport industry. The Euroqualification discussed in Chapter 2 is an example of the social partners and training organisations taking into consideration the increasing internationalisation of the road transport sector. However more can be done.

A general recommendation is also made that **a survey of the costs and benefits of training should be undertaken**. This would hopefully provide information on cost-effective CVT. It would also help satisfy the many small companies who have doubts about the usefulness of training. Until such a survey is done this issue will represent a major stumbling block to the achievement of any significant level of continuous training within small transport companies.

Figure 6.1 A Framework for Developing CVT


Set Corporate Objectives, Develop Strategies and Goals
Allocate Responsibility for Training at a High Level
Assess Existing Skills and Identify Skills Gaps
Skill Needs Assessment Exercise
Select CVT Themes & Purchase/Design CVT Programmes. Set Targets for Results
Feedback from Customers and CVT Participants
Implement
Input from Training Bodies and Co-Operation with other Companies if needed
Follow Through in Day to Day Operations (Infiltrate the Corporate Culture)
Evaluate Against Targets

APPENDICES

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APPENDIX I

ECONOMIC RETURN OF COMPANY TRAINING IN ROAD TRANSPORT: A FRAMEWORK FOR ANALYSIS

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ECONOMIC RETURN OF COMPANY TRAINING IN ROAD TRANSPORT: A FRAMEWORK FOR ANALYSIS

Company training programmes are considered of great economic importance. Because of the direct involvement of companies, company training programmes are expected to be better geared to company needs than, say, programmes of regular education, and to give a higher economic return in the form of better company performance. In that view, underinvestment in company training would be a serious disadvantage because it would slow down economic development.

The road transport sector is a sector with relative small investments in training compared to other sectors. However, training seems to be more and more important in the light of sectoral developments, like the increased importance of quality, and the broadening of the activities towards logistic services. One of the bottlenecks for investments in training is that it is very difficult to calculate the economic benefits of training. "Hard evidence" of the benefits would ease the decision of employers to invest in training.

This paper presents a framework for possible ways for measuring the economic benefits of training. The framework will be split in analyses on two levels:

1) An analysis using cross-section data among several companies. The idea behind the analysis is to find out if companies investing more in training, perform better in economic sense, compared to companies investing less[1].

2) The above framework can only be used by collecting data of several companies. It will give an average effect of training. However, an individual company does not have the possibilities to do such an analyses. Moreover, the individual employer wants to know more specifically the economic return for **his** company. The limitations for such an analysis are larger, but still we will present a possible framework for an analysis on the individual company level. The idea of this analysis is to compare trained workers with non-trained workers[2].

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[1] This framework is more detailed described and applicated in two papers:
- J. de Koning, A. Gelderblom (NEI), *Company training: volume, underinvestment and return*, paper for the fourth EALE Conference, Warwick, 3-6 September 1992.
- J. de Koning, A. Gelderblom (NEI), *Age, productivity and wages*, paper for the fourth EALE conference, Warwick, 3-6 September 1992.

[2] A more detailed description of such an analysis, as well as an application can be found in: A. Gelderblom, J. de Koning, *Evaluating effects of training within a company: methods, problems and one application*, paper for the fifth EALE Conference, Maastricht, 30th September-3rd October 1993.

The framework for the cross-section of companies

Training can have many desirable effects, such as easier recruitment, lower quit rates, reduced illness and work-accidents, etc. In this section we will concentrate on productivity effects, because this can be seen as the core benefit when speaking about economic return of company training.

The essence of the analysis is to explain the labour-productivity of several road transport companies by differences in levels of investment in training.

First, productivity per company must be measured. A possible indicator to measure productivity differences between companies is the number of tonkms per worker. However, this productivity measure is not very suitable to compare individual companies. Some companies concentrate on transport on heavy goods (e.g. bulk goods) while other specialise in transporting goods with less weight. When using tonkms per company, the first groups will automatically be more "productive"[3].

An alternative is to use total value added of a company and to divide this by the total workforce. When value added figures are not available, turnover figures could be used as an alternative. In this sector specific attention should be given to the calculation of the total workforce. A correction should be made for differences in working time between companies, because overtime work is substantial, and differs per company. A normal procedure is to standardise the workforce for working time differences, for example by using manyears.

A correlation analysis to see if companies with more training efforts correspond with a higher productivity will not suffice as the next step of analysis. Two problems have to tackled:

- Participation in training will not be the only factor influencing the productivity. Other factors could be the investment level, size of the company and the composition of the workforce.

- The causality problem. The fact that successful companies appear to be more than averagely active in company training evidently does not say anything about the sense of the causal relation. Companies operating successfully have more means to invest in training. So the causal relationship could be both ways. Econometric testing is possible to take account of the possibility of mutual causability.

Both problems can be tackled by using a model of two equations. One equation explains the company performance (productivity) from the training efforts and a set of checking variables; the other explains the training effort from the company performance and a different set of checking variables. The model becomes more complex when provisions are made for lags. For instance, the training efforts in year t may have no influence on the company performance in year t, but will on that of year t+1.

An interesting option for those involved in training policy, is the possibility of incorporating variables for the way training is organised in companies in the equation explaining productivity.

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[3] In a productivity comparison between countries this disadvantage will be much smaller, because every country has a mix of different transported goods.

Training could be organised in various ways: an important difference is for example training organised internally and hired in external training. The equation gives the possibility of testing to see if the way of organising training influences the results.

Previous research of the NEI on a comparable basis as described above, has shown statistical evidence that training improves the productivity of those participating[4]. In one of these researches, companies from six sectors were included. The road freight transport sector was one of these sectors. This illustrates that the collecting of the necessary data in this sector is possible. However, more observations are necessary to perform this analysis separately for the road transport sector.

A framework for statistical measurement of productivity improvement for an individual company:

It is practically impossible to determine to overall effect of training on the performance of an individual company, except in the case a company consists of a number of establishments. In the latter case a cross-section analysis over the establishments could be used to asses the effects of training on overall performance. If this is not possible only time-series analysis on a single company would be feasible, but it will be extremely difficult to isolate the effects of training in such an analysis.

An alternative is to determine inside the company whether training has desirable effects on the performance of individual employees. In that case we could assume that a positive effect of training on individuals improves the overall performance of the company[5].

A crucial element of a measurement on the individual level is the determination of the performance of individual workers. This performance could be compared before and after training. Another possibility is comparing the performance of those with and without training. Especially the latter kind has methodological problems of selectivity. It is possible that those who already perform good are more often selected into training. In that case a positive correlation between performance and training efforts could only be the reflection of the selection process into training. Econometric methods exist to correct for this selectivity problem, but these methods are rather complex and also criticised[6]. Therefor, the first option - measurement of performance before and after training - is to be preferred.

How could we measure individual performance before and after training? In the cross-section over companies we measured productivity in money-terms per company. However, it is nearly impossible to determine **individual** productivity in money terms. So the only alternative is to use performance indicators, either by management or the worker himself.

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[4] Both studies mentioned in footnote ... give a more precise description of results. However, it should be kept in mind that if company training may favour the results of the companies involved, it is possible that macro-effects are smaller, because firms with large training efforts could have improved their results at the expense of other companies. On the other hand, schooling of some groups (like seniors) could be hardly attractive to companies, but socially profitable. So for several reasons the results for the company level could diverge from the macro level.

[5] The effects on individual level are not necessarily equal to the company level. For example: those who do not participate in training could profit from the improved abilities of those trained. Positive effects of training on participating individual could in this way be "exported" to others.

[6] This point is much more elaborated in: A. Gelderblom, J. de Koning, *Evaluating effects of training within a company: methods, problems and one application*, Paper for the fifth EALE Conference, Maastricht, 30th September - 3rd October 1993.

In the road transport sector, it is not a normal practice to make judgements of the employees periodically by their managers. Even if they are used, one should look at the outcomes of the judgements carefully, because in general they tend to be very positive[7].

An alternative could be to use a survey among employees in which employees are asked to give their perceived growth in functioning on several work-aspects. Has the performance improved/remained stable/decreased on a certain work-aspect in the last years? In another part of the questionnaire, the employees could be asked what courses they have followed in the last years. This makes it possible to statistically test to what extent participation in training has had an influence on performance in several work-aspects. It is important in this context that the questions concerning perceived performance on the one hand and courses on the other hand are not connected in the questionnaire and that other elements influencing the performance are also included in the questionnaire. This ensures that the employee answers the questions on performance development independent of training participation in order to avoid "social wanted" answers. When the influence of training on performance is directly asked, could lead to very positive answers: "smile sheets".

The way the courses are organised could also be included in the questionnaire (e.g. internal vs. external) for the employees to see if organisational aspects have influence on the effectivity.

The result of the statistical analysis on the individual level can give hard evidence on the fact that performance is positively influenced by training, although the determination of the exact money return is not possible. If the employees could give an estimate of their development in productivity[8] in the last years, would even make a rough calculation of money return possible.

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[7] The reasons for this are twofold. First, a positive judgement is supposed to increase the motivation of the worker. Secondly, managers are sometimes reluctant of openly criticising the performance of workers.

[8] This would mean questions like: If your performance in 1993 was say 100, what figure would you use for your performance in 1995?

APPENDIX II

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